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PERSONAL.

Mr. A. C. Michaelis, General Manager of the Central Ry. of Guatemala, has resigned.

Mr. E. B. Sedgwick, Locomotive and Car Superintendent of the Interoceanic Ry. of Mexico, has resigned.

Mr. W. H. Wetzel, of Bellefonte, Pa., was recently appointed Surveyor of Center County, Pennsylvania.

Mr. T. Howard Barnes has been appointed City Engineer and Mr. Charles H. Parker, Commissioner of Sewers, of Medford, Mass.

Mr. C. G. Vaughn, Purchasing Agent of the New Orleans & Northwestern Ry., has been appointed Chief Engineer, with headquarters at Natchez, Miss.

Mr. John D. Muders, President of the Board of Water-Works Commissioners, of Newport, Ky., has resigned. He has been a member of the board for the past four years.

Lord Kelvin has been made Honorary Colonel, and Dr. John Hopkinson, F. R. S., Major, of the recently organized Volunteer Corps of Electrical Engineers of London, Eng.

Mr. Frank Thomson, President of the Pennsylvania R. R., and of the Pennsylvania Lines West of Pittsburg, with offices in Philadelphia, has in addition been elected President of the Northern Central Ry.

Mr. J. M. Percy, formerly Master Mechanic of the Cincinnati, Hamilton & Dayton Ry., has been appointed Master Mechanic of the Baltimore & Ohio Southwestern Ry., with headquarters at East St. Louis, Ill.

Mr. Joseph McCabe, formerly Superintendent of the Pacific Division of the Northern Pacific Ry., with headquarters at Tacoma, Wash., has been appointed General Manager of the Washington & Columbia River Ry., with office at Walla Walla, Wash., succeeding Mr. W. D. Tyler.

Mr. Bertram Brewer has been appointed City Engineer, Mr. John T. Pownall, City Electrician, Mr. Samuel Patch, Superintendent of Public Buildings, and Mr. Richard A. Jones, Superintendent of Streets, of Waltham, Mass.

Mr. J. P. Ramsey, General Manager of the Rio Grande, Sierra Madre & Pacific Ry., with headquarters at El Paso, Tex., has accepted the position of General Manager of the Chihuahua & Pacific Ry., which is being built from Chihuahua to Topolobampo, Mexico.

Mr. Howard G. Kelley, M. Am. Soc. C. E., Chief Engineer of the St. Louis Southwestern Ry., with headquarters at Tyler, Tex., has accepted the position of Chief Engineer of the Minneapolis & St. Louis R. R., with headquarters at Minneapolis, Minn., succeeding Mr. Charles Wanzer.

Mr. James Dun, Chief Engineer of the Atchison, Topeka & Sante Fe Ry., with headquarters in Topeka, Kan., has been chosen to represent all the railways interested in the elevation of tracks on 60th St., Chicago, Ill. There are a dozen railways leaving the Polk St. and Rock Island depots which use the tracks at Clark and 60th Sts. The cost of the work to be done by the railways will be about $500,000, according to report.

Mr. William W. Locke, Assoc. Am. Soc. C. E., formerly Sanitary Engineer to the Department of Health, Brooklyn, N. Y., has accepted the position of Sanitary Inspector on the Sudbury and Cochituate Water Sheds of the Metropolitan Water Board of Boston, Mass., and will not open an office in Brooklyn, as was reported in our issue of Feb. 17. His address will be 49 Concord St., South Framingham, Mass.

Mr. E. H. Foster, M. Am. Soc. M. E., of New York, who has been connected with the firm of H. R. Worthington since 1884, his work being chiefly in the water-works engine department, has sailed for London, England, where he is to act as mechanical engineer for the European business of the firm, which is handled there under the name of the Worthington Pumping Engine Co. Mr. Foster represented the firm at the Paris exposition in 1889.

Mr. Thomas W. Cridler, Third Assistant Secretary of State and Special Commissioner of the United States to the Paris Exposition of 1900, accompanied by Col. L. M. Hamburger, U. S. Army, Assistant to the Commissioner, and Lieut. A. C. Baker, U. S. Navy, Attache to the Commission, sailed on the "New York," Feb. 23, for Southampton, en route for Paris. They will be gone six weeks. Mr. Cridler is the successor of the late Maj. Moses P. Handy, whose death was reported in our issue of Jan. 13.

Dr. Edgar Kidwell has resigned his position as Professor of Mechanical and Electrical Engineering in the Michigan College of Mines, Houghton, Mich., which he has held for eight years. When he took this professorship in 1890, the institution was just organized, and he has done much toward bringing it to its present position. He has especially developed the mechanical department, and it now occupies a large and well-equipped building. While carrying on this work he has found time to perfect several inventions, pursue a number of special investigations, and contribute to the technical press papers on technical and educational topics.

OBITUARY.

Mr. Isaac S. Metcalf, civil engineer, of Elyria, O., died recently, aged 76. He was a graduate of Bowdoin College, Brunswick, Me., in 1847.

Hon. Robert Blee, ex-Mayor of Cleveland, O., and at one time General Superintendent of the Cleveland, Columbus, Cincinnati & Indianapolis R. R., died at Cleveland, Feb. 26, aged 59.

Mr. Albert A. Henry, a structural engineer in the employ of the Pennsylvania Iron Works, Philadelphia, committed suicide, Feb. 25, by jumping from the middle span of the Eads Bridge, across the Mississippi River, at St. Louis, Mo. He was 38 years of age.

Mr. Robert Law, formerly a prominent contractor of Chicago, Ill., died in that city, Feb. 24, aged 76. He was a native of England, and as a contractor built a part of the Chicago & Northwestern Ry., from Galena to Rockford, and a part of the Illinois Central R. R., from Dubuque to La Salle.

Mr. Samuel F. Leopold, President of the Lake Michigan & Lake Superior Transportation Co., died in Chicago, Ill., Feb. 26, aged 72. He was born in Germany and went to Chicago in 1867. He established, forty years ago, the company of which he was president, and held the office continuously until his death.

Mr. William M. Singerly, proprietor of "The Philadelphia Record," died in that city, Feb. 27, aged 65. He was prominently identified with manufacturing enterprises in that city, and was at one time Manager of the Germantown Passenger R. R. For years he held the honorary position of Commissioner of Fairmount Park.

Dr. W. A. Rogers, M. Am. Soc. M. E., Professor of Natural Philosophy and Astronomy in Colby University, Waterville, Me., died on March 1, aged 66. He was born in Waterford, Conn., and was graduated from Brown University in 1857. For 13 years following he taught astronomy and mathematics in Alfred Academy, and in 1870 was made an assistant in the observatory of Harvard College. In 1877 he was made Assistant Professor of Astronomy in that college, and in 1886 he accepted the professorship of astronomy and physics in Colby University. He was a Fellow of the Royal Society of London, a member of the National Academy of Sciences, a Vice-President of the American Association for the Advancement of Science, and President of the American Society of Microscopists.

Prof. Knut Styffe, of Stockholm, Sweden, died Feb. 3, aged 74. He was noted as an authority on iron and steel. He received his education at the University of Upsala and the School of Mines at Falun, Sweden. He was afterwards engaged as a mining engineer in the Sala silver mines until called by the government to be the Chief Director of the Royal Technical Institution at Stockholm. Forty years ago, when railway construction was begun in Sweden, he was appointed chief of a committee to make researches as to the adaptability of using the native iron and steel for railway construction. He held this post for five years and published a work on the elasticity, extensibility and tensile strength of iron and steel, which attracted a great deal of attention in the engineering press at the time. In 1862 he was Juror for Sweden for mining and metallurgy at the London International Exhibition, and at the later expositions in Paris and Vienna.

Mr. Dennis Doren, General Superintendent of Construction, of the Western Union Telegraph Co., died at Norwalk, O., Feb. 25, of apoplexy. He was born in Wooster, O., Feb. 13, 1830, and at 20 years of age began the work of telegraph construction. He had charge of the building of the first lines along the Indianapolis & Terre Haute R. R. and the Ohio & Mississippi R. R. During the Civil War, Mr. Doren had charge of the telegraph construction corps of the Department of the Potomac. In July, 1866, he received from the government one of 12 watches presented to men for meritorious service. In 1866 he was made Superintendent of Construction and Repairs for the Eastern Division of the Western Union, and built the lines connecting with the Atlantic cable. In 1881 he became President of the American Cable Construction Co., and held that office until the Western Union Telegraph Co. leased the cables. Mr. Doren was made General Superintendent of Construction and Repairs of the Western Union company in 1881, and has held the office ever since.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

TECHNICAL SOCIETY OF THE PACIFIC COAST.
Mar. 4. Secy., O. Von Geldern, 819 Market St., San Francisco, Cal.

CHICAGO ELECTRICAL ASSOCIATION.
Mar. 4. "The Relationship of the Hunter and Tesla Patents," A. Miller Belfield. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.
Mar. 5. "The Inspection of Buildings," Benj. Franklin. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Mar. 7. Secy., C. L. Annan, City Engineers' Office, St. Paul, Minn.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Mar. 7. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

DENVER SOCIETY OF CIVIL ENGINEERS.
Mar. 8. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Col.

NORTHWEST RAILWAY CLUB.
Mar. 8. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.

RAILWAY SIGNALING CLUB.
Mar. 8. Pittsburg, Pa. "The Operation and Maintenance of a Block Signal System on a Single Track Railway," W. A. D. Short. Secy., Earl M. Seitz, C. & N. W. Ry., Chicago, Ill.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Mar. 8. Secy., Wm. H. Searles, Case Library Bldg., Cleveland, O.

FRANKLIN INSTITUTE.
Mar. 8. "Radiography," Prof. Arthur Goodspeed; Mar. 9. "The Development of the American Portland Cement Industry," Robt. W. Lesley; Mar. 22. "The Substitution of Electricity for Steam on Suburban Roads," Dr. Louis Duncan. Secy., Wm. H. Wahl, 15 S. Seventh St., Philadelphia, Pa.

ONTARIO LAND SURVEYORS.
Mar. 8-10. Annual meeting, Toronto, Ontario. Secy., A. J. Van Nostrand, Toronto, Ont.

NEW ENGLAND RAILROAD CLUB.
Mar. 9. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.

CENTRAL RAILWAY CLUB.
Mar. 11. Secy., H. D. Vought, "Courier," Buffalo, N. Y.

NORTHWESTERN TRACK AND BRIDGE ASSOCIATION.
Mar. 11. Secy., D. W. Meeker, St. Paul, Minn.

ST. LOUIS RAILWAY CLUB.
Mar. 11. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

MONTANA SOCIETY OF ENGINEERS.
Mar. 12. Secy., Albert S. Hovey, Helena, Mont.

INDIANAPOLIS ENGINEERING CLUB.
Mar. 12. Secy., Edson F. Folsom, Indianapolis, Ind.

ENGINEERS' CLUB OF KANSAS CITY.
Mar. 14. Secy., F. W. Tuttle, Baird Bldg., Kansas City, Mo.

ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Mar. 15. Secy., R. A. Fessenden, 410 Penn Ave., Pittsburg, Pa.

WESTERN RAILWAY CLUB.
Mar. 15. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.

BOSTON SOCIETY OF CIVIL ENGINEERS.
Mar. 16. Secy., S. E. Tinkham, City Hall, Boston, Mass.

WESTERN FOUNDRYMEN'S ASSOCIATION.
Mar. 16. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.

ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Mar. 16. Secy., Frank H. Olmsted, Los Angeles, Cal.

WESTERN SOCIETY OF ENGINEERS.
Mar. 16. "Mechanical Plants of Large Buildings," Dankmar Adler, and "Improved Portland Cement," John W. Dickinson. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.

ENGINEERS' CLUB OF ST. LOUIS.
Mar. 16. Secy., Richard McCulloch, St. Louis, Mo.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Mar. 16. "Movable Dams," B. F. Thomas. Secy., C. W. Hunt, 220 West 57th St., New York city.

CANADIAN SOCIETY OF CIVIL ENGINEERS.
Mar. 17. Secy., C. H. McLeod, 112 Mansfield St., Montreal, Can.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Mar. 17. Secy., F. A. Charpiot, Macon, Ga.

ENGINEERS' CLUB OF CINCINNATI.
Mar. 17. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.

NEW YORK RAILROAD CLUB.
Mar. 17. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.

ENGINEERS' CLUB OF COLUMBUS.
Mar. 19. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.

TECHNICAL CLUB OF OMAHA.
Mar. 21. Secy., J. Harry Lawrie, Omaha, Neb.

ENGINEERS' CLUB OF MINNEAPOLIS.
Mar. 21. Secy., H. E. Smith, 1620 S. E. 4th St., Minneapolis, Minn.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Mar. 21. Secy., Jas. K. Zollinger, 16 Norton Bldg., Louisville, Ky.

ENGINEERING ASSOCIATION OF THE SOUTH.
Mar. 24. Secy., C. B. Wilson, Nashville, Tenn.

THE AMERICAN SOCIETY OF IRRIGATION ENGINEERS.
Mar. 25-26. Annual Meeting, Denver, Colo. Secy., John S. Titcomb, 38 Jacobson Block, Denver, Colo.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.
Mar. 30. Secy., R. W. Pope, 26 Cortlandt St., New York city.

BROOKLYN ENGINEERS' CLUB.
April 7. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ILLINOIS STREET RAILWAY ASSOCIATION.
May 18. Annual meeting. Secy., C. K. Minary, Springfield City R. R., Springfield, Ill.

THE ENGINEERS' CLUB OF PHILADELPHIA.—At the meeting, on Feb. 19, Mr. Francis Schumann, President of the Club, read a paper entitled "The Dome of the City Hall Tower," in which he described in detail the plan and construction of the framework, the covering and the ornamentation of this dome, and the method of electroplating the metal covering that was used. The paper was fully illustrated with lantern reproductions of photographic views and drawings.

FRANKLIN INSTITUTE.—A special meeting of the Mining and Metallurgical Section, together with the Numismatic and Antiquarian Society of Philadelphia, was held Feb. 24, at which Capt. E. L. Zalinski, U. S. A., read an interesting paper on "Japanese Swords." In the discussion which followed Mr. Benj. Smith Lyman contributed some interesting correspondence from Mr. Edward Gilbertson, the English expert on Japanese art.

J. S. de Beuneville, Secy. M. & M. Section.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—At the regular meeting of the Society, held in New York city, Feb. 16, Mr. Herbert M. Wilson presented a paper on "Spirit Leveling of the United States Geological Survey." The paper described the work being done by the Geological Survey to comply with an act of Congress providing permanent leveling stations or bench marks in all future work of the Survey. The plan pursued, character of marks, arrangements, extent and cost of work, method of observing, style of instruments and rods used, and numerous other points, were described.

ENGINEERS' CLUB OF COLUMBUS.—At the regular meeting on Feb. 19, Mr. E. B. Fox read a paper on "Fireproof Buildings," which was based upon observations made during and after the destruction of the supposed-fireproof buildings in Pittsburg, Pa. (Eng. News, Feb. 17, 1898.) Extracts were given from the reports of the insurance adjusting committee, appraisers and consulting engineers. He said that a fireproof building could not be constructed if it was to be filled with combustible material, but under such conditions it was possible to materially reduce the risk by proper care and attention to design and construction.

ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.—At the meeting on Feb. 21, Mr. Robt. Spurr Weston read a paper entitled "Sanitary Aspect of Water Supplies." Mr. Weston has been employed for the past 18 months as sanitary chemist of the Louisville Water Co., during which time he has been making microscopic investigations with a view of determining the best method of purifying the water used in Louisville, Ky., which is taken from the Ohio River. Mr. Calvin M. Duke also read a paper which described the Kentucky Street metal and concrete bridge, now under construction at Louisville.

Jas. K. Zollinger, Secy.

MINNESOTA SURVEYORS' AND ENGINEERS' SOCIETY.—At a session of this Society, held at the St. Paul Commercial Club, Minnesota, Minn., Feb. 22, Mr. Geo. A. Ralph, of Crookston, read a paper on "The Area and Value of Lands Recovered by the State Ditches in Roseau and Polk Counties." The following day, Prof. W. M. Hays read a paper on "Practical Road Legislation." In this he said that farmers and those really needing good roads had too little faith in expert knowledge and practical experience in road building. He referred briefly to the state constitutional amendment which provides for a state fund of $40,000 to be annually distributed among the several counties for the construction and maintenance of good roads and bridges. Mr. Geo. L. Wilson, civil engineer of St. Paul, gave a short talk on bicycle paths and their construction. The following officers were elected for 1898: Pres., W. R. Hoag; Vice-President, O. J. Anderson; Secy., Chas. A. Forbes; Treas., William Danforth.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—The 122d meeting of the Institute was held at 12 West 31st St., New York city, Feb. 23. The paper of the evening by Mr. Chas. P. Steinmetz, of Schenectady, N. Y., was a full consideration of the single-phase induction motor. Tables, curves and other data were presented to illustrate the action of this type of machine. Some discussion followed, relative to the best method of considering the magnetic field of the single-phase induction motor. Dr. A. E. Kennelly considered the two-field theory with the magnetism rotating in opposite directions, as the simplest, provided the distortion due to armature reaction was taken into consideration. Mr. Steinmetz said his experience had forced him to adopt other methods, and that for any purpose the double rotating field was wrong unless armature reaction was taken into account. In response to a question Mr. Steinmetz stated that single-phase induction motors were made in sizes up to 200 HP., although there was very little call for large sizes, owing to the inability to obtain large currents where generators were not run in parallel.

WESTERN SOCIETY OF ENGINEERS.—The following schedule and list of papers is announced for the spring meetings: Mar. 16, "Mechanical Plants of Large Buildings," Dankmar Adler, and "Improved Portland Cement," John W. Dickinson; Mar. 26, "Illustrated Lecture on Mexico," Wm. J. Karner; Apr. 6, "Fireproof Construction," Wm. Sooy Smith, and "Fireproofing of Warehouses," Frank B. Abbott; Apr. 20, Topical discussion upon "Electrical, Pneumatic and Mechanical Power Transmission in Manufacturing Establishments," Prof. D. C. Jackson, H. M. Brinkerhoff and G. P. Nichols; May 4, "Locomotive Water Supply," Theodore W. Snow, and "The Cyclodial Pump," Chas. E. Billin; May 18, "Gaging of Streams," Wm. G. Price, and "The Use of Coke Breeze in Sewage Purification," John W. Alvord; June 1, "Obstructive Bridges and Docks of the Chicago River," G. A. M. Liljencrantz, and "Measuring Apparatus of Kings' County Survey," Samuel McElroy; June 11, "Three Months Among the Engineering Works of England and France," Prof. N. O. Whitney; June 22, "Railway Drawbridges," Wm. H. Finley; July 6, "Establishment of Street Grades," Chas. P. Chase. In addition to the above the following papers have been offered: "Masonry," Geo. S. Morison, and "Track Elevation on the C. & N. W. Ry.," Louis H. Evans.

ONTARIO LAND SURVEYORS.—The 6th annual meeting of this society will be held in Toronto, beginning Mar. 8. The following list of papers will be presented: "Irrigation of Dominion Lands," A. W. Ponton; "Acetylene Gas and Its Uses," V. M. Roberts; "Specifications," Jas. Hutcheon; "Progress on Lake of the Woods," H. DeQ. Sewell; "Unrecorded Original Field Notes," J. J. Murphy; Report of Committee on Exploration, E. Stewart; "The Economic Resources of the Hudson Bay District," J. W. Tyrrell; "Forestry in Its Relation to Land Surveying," T. N. Southworth; "Some Causes of Loss in Gold Mining in Ontario," Capt. J. D. Williams; Report of Committee on Engineering, A. W. Campbell, Chn.; "The Sewerage Purification Works of Worcester, Mass.," W. S. Van Buskirk; "Sand Cement," M. J. Butler; "Sudbury Water-Works," S. V. Rorke; "The York St. Bridge," A. P. Walker; Report of Committee on Land Surveying with Question Drawer, M. Gaviller, Chn.; "Assessment Plans," P. S. Gibson; "An Illustration of the Necessity for Accurate Descriptions," Geo. Ross; "Evidence," M. J. Butler; Report of Committee on Topographical Survey, Otto J. Klotz, Chn.; "Lake Erie Survey," Otto J. Klotz; Report of Committee on Drainage with Question Drawer, W. G. McGeorge, Chn.; "The Kinburn Swamp Drain," F. W. Farncomb; "Arbitrators and Witnesses," H. J. Bowman; "The Use of Field Tile for Large Drains," W. M. Davis; Report of Committee on Entertainment, A. P. Walker, Chn.

NEW PUBLICATIONS.

THE CONSTITUTION OF HYDRAULIC CEMENTS.—By Spencer B. Newberry and W. B. Newberry; "Cement and Engineering News," Chicago, Ill. Paper; 6 × 8 ins.; pp. 16; 25 cts.

This pamphlet is a reprint of the paper having the above title, presented by the authors to the New York Section of the Society of Chemical Industry at its meeting of Oct. 22, 1897.

STATE BOARD OF HEALTH OF OHIO.—Report for the year ending Oct. 31 1896. C. O. Probst, M.D., Secretary, Columbus, O. Cloth; 6½ × 10½ ins.; pp. 376 + 80.

This volume contains, among other things, reports made by the board in response to applications for approval of plans for water supply and sewerage work. It also contains the report of the Joint Meeting of State and Local Boards of Health held at Columbus in January, 1897.

RULES AND INSTRUCTIONS, MAINTENANCE OF WAY DEPARTMENT, SOUTHERN PACIFIC CO.—J. Kruttschnitt, General Manager. Flexible leather; 4¼ × 6¾ ins.; pp. 143; illustrated.

This is a copy of the handbook of rules and instructions for the government of employees which is issued by the Southern Pacific Co. to the employees in its maintenance of way department. The book is very well gotten up and really forms a small treatise on maintenance of way work as carried on by this one railway.

PROCEEDINGS, AMERICAN SOCIETY OF RAILROAD SUPERINTENDENTS, 1897.—Published by the Society, C. A. Hammond, Secretary, Asbury Park, N. J. Paper; 7 × 10 ins.; pp. 70.

This number of the "Proceedings" contains the business transactions and the special committee reports and discussions at the Nashville, Tenn., meeting, held Sept. 22 and 23, 1897. Among the committee reports worthy of mention are those on "Chemical Preservation of Cross Ties;" "Discipline;" "Economic Train Load;" "Economy in Fuel and Oil for Locomotives;" and "Correct Gage of Car Wheels." The pamphlet also contains the constitution and list of members of the society.

ANNUAL REPORT; BOARD OF HARBOR AND LAND COMMISSIONERS OF MASSACHUSETTS, FOR 1897.—Woodward Emery, Charles H. Howland and Clinton White, Comissioners. Pub. Doc.; paper; 6 × 9 ins.; pp. 121; illustrated.

This report is given up mostly to a record of the progress of work in the line of improving the harbors and rivers of the state of Massachusetts, which is being done under the direction of the Commission and by the U. S. Government. The most notable of the new improvements for which contracts were let during the year is an earth-filled granite pier and sea wall at South Boston Flats, drawings and a description of which will be published in a future issue of Engineering News.

BROOKLYN ENGINEERS' CLUB.—Proceedings for 1897, and Constitution, By-Laws and List of Members. January, 1898. Cloth; 9 × 6 ins.; pp. 168; illustrated; $1.00.

This is the first annual issue of the proceedings of this club, organized in 1896. Besides the constitution, by-laws, list of members, proceedings of annual meeting and reports for 1897, it contains the following papers: "Survey and Construction of South Pennsylvania Railroad," J. Strachan; "Brooklyn Tunnels," W. T. Bruorton; "Asphalt Pavements," F. N. Vail; "Notes on Memphis Water-Works," E. H. Foster; "Electric Lighting of New York Harbor," F. A. Barron; "Proposed Method of Building a Submerged Tunnel," G. C. Meem; "Tool Steel," Charles L. Hastings. The office of the Secretary and Treasurer of the club is at 191 Montague St., Brooklyn, N. Y.

RULES AND REGULATIONS, OPERATING DEPARTMENT, SOUTHERN PACIFIC CO.—J. Kruttschnitt, General Manager. Flexible leather; 4 × 6¾ ins.; pp. 116; illustrated.

This is the regular book of rules and regulations issued by the Southern Pacific Co. to employees of the operating department of the Pacific System. The first 27 pages, comprising 146 rules, comprise the general regulations for all employees, and special rules for trainmen, agents and operators, yardmasters, etc. Following this come lists of 31 rules covering the work of trackmen, bridgemen and watchmen, and 110 rules relating to standard time and timepieces; time tables; train, bell-cord, whistle, lamp and other signals; classification of trains, and movement of trains. The remaining 60 pages contain rules for train movement by telegraphic orders; forms of train orders; speed tables; signal diagrams, automatic block signal and interlocking signal rules, air brake rules and instructions to train inspectors.

THE MONTHLY OFFICIAL RAILWAY LIST.—Chicago: Railway List Co. Paper; oblong; 8¼ × 4½ ins.; pp. 398; $1 per year.

This monthly publication takes the place of the annual list issued by this company for the past 16 years, and in view of the continued changes in railway officers it will be much more useful than any annual publication could be. It is announced that changes will be made promptly, and the list kept corrected up to date, and there are also three or four pages of personal notes in regard to changes. The railways are arranged in alphabetical order, with the names of officers, mileage and number of locomotives and cars given in each case. There are also lists of telegraph, sleeping car, private car and fast-freight companies, technical associations, railway commissions, and the traveling representative of railway supply firms. An alphabetical list of all officials mentioned is given, and there is a special index to cities in which there are railway general offices or main or division shops.

ROUTES TO THE YUKON.—Report of Mr. W. T. Jennings, C. E. Printed by order of Parliament, Ottawa, Canada, 1898 Paper; 9¾ × 6½ ins.; pp. 28; no maps.

This is an interim report to the Minister of the Interior, at Ottawa, made under date of Dec. 15, 1897. Mr. Jennings, under instructions from the Canadian government, has examined and reports upon the following highway and railway routes to the Yukon: For a highway or railway route between Stikine River and Teslin Lake, and an examination of Teslin Lake and Hootalinqua River; the McClintock River portage of 29 miles; a railway line from Chilkat Pass to the Yukon River, by way of the Nordenskold River, 245 miles in all; railway route from Dea, via Chilkoot Pass to Tagish Lake, and thence to Hootalinqua River in Canada, a distance of 111 miles; a railway route from Skaguay, via White Pass to Tagish Lake, thence to the Hootalinqua River, or 123 miles; and route via Taku and Makinak River to Teslin Lake, 145 miles. These routes and the country through which they pass are described in as much detail as a rapid reconizance would permit, and the maps already submitted and referred to will doubtless be published with the fuller report. Those interested should apply to Hon. Clifford Sifton, Minister of the Interior, Ottawa, Canada.

ANNUAL REPORT OF THE MAINE STATE RAILROAD COMMISSION FOR 1897.—J. B. Peaks, Frederic Danforth, Benj. F. Chadbourne, Commissioners. Cloth; 6 × 9 ins.; pp. 400; illustrated; map in pocket.

This report of the commission has a number of very handsome half-tone views of bridge trestles, stations and station grounds, yards, and natural scenery on the lines of the different railways of the State, but aside from this feature, it is devoted mostly to the description of the routine work of the commission and the detailed reports of operations of the different companies. During the year ending June 30, 1897, a total of 6.91 miles of new railway, only, were constructed. The results of operations during the same period show an increase in freight earnings but a considerable decrease in passenger earnings, resulting in a decrease in gross income from operations of 2.3%. The accidents to passengers during the year resulted in the injury to 25 persons, but no passengers were killed. Twenty employees were killed and 70 injured by accidents. Considerable work has been done in the line of renewals of bridges, track and permanent way and the railways of the State generally show an improved physical condition as compared with the preceding twelve months.

TRADE PUBLICATIONS

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

BIPOLAR GENERATORS AND MOTORS.—A brief circular describing type "L. H." bipolar "Siemens" machines.

FIRE HYDRANTS.—Norwood Engineering Co., Florence, Mass. Paper; 3½ × 6 ins.; pp. 12; illustrated.

This is a priced catalogue of Holyoke hydrants, frost cases and accessories.

PUMPING MACHINERY.—Barr Pumping Engine Co., Philadelphia. Pamph.; 6 × 9 ins.; pp. 59.

This catalogue illustrates a variety of styles of pumps and pumping engines, both flywheel and direct acting.

ELECTRIC RAILWAY CONDUIT.—A reprint from the "Street Railway Journal" describing the system used in Buda Pesth, Hungary, and installed by the Siemens-Halske Co.

FEED-WATER HEATERS AND PURIFIERS.—The Stilwell-Bierce & Smith-Vaile Co., Dayton, O. Pamph.; 6 × 9 ins.; pp. 93.

This catalogue describes a number of different styles of feedwater heaters and purifiers.

TURBINES.—The Stilwell-Bierce & Smith-Vaile Co., Dayton, O. Pamph.; 6 × 9 ins.; pp. 158.

This is a very handsomely illustrated catalogue of the "Victor" turbine, in a variety of forms and settings, also of governors and other water-wheel appliances.

SOLENOID BLOW-OUT CONTROLLER. Type "S"; circular 1057.—This is a description of the latest type of the Walker platform electric car controller, published to call attention to a new device for preventing arcing at the contact points as well as a number of improvements. Drawings are given showing these points in detail and also the method of connecting and operating this type of controller.

FIRE APPARATUS.—Indianapolis Engine Co., Indianapolis, Ind. Pamph.; 6 × 9 ins.; pp. 32.

The appliances illustrated in this catalogue include chemical and water fire engines, hand engines, hook and ladder trucks, hose reels, triplex power pumps, etc.

PARTIAL LIST OF PLANTS.—This, as its name implies, is a more or less complete list of the apparatus installed by the Siemens-Halske Co. of America, and includes tabulated lists, a number of letters from users of the company's machinery, etc.

GENERATOR CONSTRUCTION. Circular No. 1056.—This is a collection of line drawings and half-tones illustrating good and bad construction as used and not used by the Walker Co. Brief descriptive paragraphs accompany the illustrations.

BAND ARC LAMPS.—In this the construction, operation and advantages of the "Band Lamp" manufactured by the Siemens & Halske Co. are given, together with instructions for handling, trimming and adjusting the voltage of the lamp.

THE WALKER PIVOTAL TROLLEY WITH GROVER TROLLEY HEAD. Circular 1058.—This is an illustrated description of an improved trolley and trolley head manufactured by the Walker Co. The points of excellence claimed for it are well set forth.

PRESSURE BLOWERS FOR CUPOLAS, ETC.—The New Jersey Blower Co. Manufactured by J. B. & J. M. Cornell, 26th St. and 11th Ave., New York city. Circular, 6 × 9 ins.; pp. 8.

This circular illustrates a new style of centrifugal pressure blower, which has recently been put on the market.

STEAM SHOVELS.—The Vulcan Iron Works Co., Toledo, O. Paper, 12 × 8 ins.; pp. 17; illustrated.

This pamphlet contains line drawings in some detail of the company's 25, 40, 55 and 90-ton "Giant" and "Little Giant" steam shovels, accompanied by brief explanatory text.

CAR DOOR EQUIPMENT.—The Q. & C. Co., Chicago, Ill. Pamph, 9 × 12 ins.; pp. 32; illustrated.

This pamphlet describes the various fixtures manufactured by this company for freight car doors, and also describes and illustrates the company's rail saws, track jacks, rail drills, etc.

MARINE GENERATORS.—Walker Co., Cleveland, O. Circular, 10⅞ × 7⅞ ins.

This is circular No. 1061 of the regular Walker series, and is a brief description of a new type of generator recently developed to meet the demand for a small, lightweight generator for marine service.

CABLEWAYS.—Lidgerwood Mfg. Co., New York, N. Y. Five pamphlets, 9 × 6 ins.; pp. 52, 30, 46, 107, 68; illustrated.

Each of these five pamphlets is devoted to illustrating and describing the Lidgerwood cableway as applied to some particular form of transportation.

SOLAR COMPASS.—W. & L. E. Gurley, Troy, N. Y. Pamph.; 7¾ × 5 ins.; pp. 24; illustrated.

Together with illustrations of the solar compass made by this firm, is published the "Solar Ephemeris for 1898," as abridged from the Nautical Almanac. It also contains other tables useful in this connection.

MACHINE TOOLS, GAGES, ETC.—Brown & Sharpe Mfg. Co., Providence, R. I. Pamph., 5¾ × 3¾ ins.; pp. 437.

This well-known catalogue of the Brown & Sharpe Mfg. Co. grows thicker every year, as pages are added describing and illustrating new machines. Some changes in list prices and discounts have also been made.

ELECTRIC ROCK DRILLS.—This pamphlet is uniform in size with the others above mentioned.. It illustrates the Siemens & Halske electric drills for either coal or rock, of either rotary or percussion types. The description is an abstract of an article appearing in the "Electrochaische Zeitschrift."

"SIEMENS."—Another pamphlet by the same company, being a reprint of an article in the "Electrical World," in which views of the construction of a large Siemens generator are given. The type of bipolar generator, arc lamp, commutator and field switch made under the name of Siemens are also illustrated and described.

ARC LAMPS.—Circular No. 1060 describes in some detail the types of direct current arc lamps manufactured by the Walker Co. Various points, such as appearance, trimming, cleaning, location of arc and shadows, mechanism, economy and accessibility are considered for its series arc, enclosed arc and constant potential lamps.

OIL-MILL MACHINERY.—The Stilwell-Bierce & Smith-Vaile Co., Dayton, O. Pamph.; 6 × 8 ins.; pp. 75.

This pamphlet contains illustrations and descriptions of a complete outfit of machinery for cottonseed and linseed oil mills. The company contracts for the erection of oil mills and delivery of their machinery in any part of the world.

MATHEMATICAL AND ENGINEERING INSTRUMENTS.—Queen & Co., 1010 Chestnut St., Philadelphia, Pa. Paper; 9 × 5¾ ins.; pp. 227; illustrated.

The 71st edition of this catalogue covers a very complete priced and illustrated list of the mathematical and engineering instruments and engineering materials sold by this long-established firm.

CREOSOTED WOOD CONDUITS.—The Michigan Pipe Co., Bay City, Mich. Pamph.; 6¼ × 3⅜ ins.; pp. 13; illustrated.

This new catalogue is especially designed to call attention to the creosoted wood conduits and other creosoted products made by this firm. The Bethell process is used, and the tubing supplied is made in 8-ft. lengths, square outside and with hole from 1½ to 3 ins. diameter. Cross-arms for telegraph poles, the poles themselves, wood paving blocks and railway ties are also creosoted. This firm builds water-works and manufactures the improved Wyckoff water-pipe and steam-pipe casing.

BRILL TRUCKS.—J. G. Brill Co., Philadelphia, Pa. Pamphlet, 10 × 6 ins.; pp. 19; illustrated.

This pamphlet illustrates and gives a quite full description of this well-known truck. Among the letters from railway managers which are published there are several which speak unusually strongly as to the advantages of this form of truck construction.

HOISTING ENGINES.—Lidgerwood Mfg. Co., New York, N. Y. Paper, 10 × 12 ins.; pp. 122; illustrated.

This is a descriptive catalogue and price list of the company's well-known hoisting engines, dredge engines, ballast unloaders, mining cars, etc. Each distinctive type of machine is quite fully described, and the tables of sizes and price lists are complete for all machines.

MICA INSULATION.—Walker Co., Cleveland, O. Circular, 10⅞ × 7⅞ ins.

This is No. 1062 of the series of circulars published by the Walker Co. It is devoted to a brief discussion of the various kinds of mica used to insulate electrical apparatus, and the method of constructing commutator rings and field core insulation employed by this company.

CARBON PAINT.—The Goheen Manufacturing Co., Canton, Ohio. Pamph.; 9 × 6 ins.; pp. 23.

This is devoted to the "Carbonized Coating" made by this firm for the preservation of iron and steel. This is a chemically combined paint, which when properly applied in two coats is guaranteed by the makers to protect the metal for 10 to 15 years without renewal.

STONE PLANING.—Lincoln Iron Works, Rutland, Vt. Pamph.; 9 × 6 ins.; pp. 14; illustrated.

This firm manufactures, and here illustrates and describes, heavy machines for planing stone. The four types of these tools range in the area planed from 3 × 12 ft. to 8 × 14 ft., and in thickness of block from 2 ft. 8 ins. to 4 ft. Circular planing machines are also made.

THUMB TACKS.—The Lawrenceville Cement Co., 26 Cortlandt St., New York city, is sending out some excellent thumb tacks, the top covered with composition and bearing the company's advertisement. They offer to send a set of these tacks free to any reader of Engineering News on request, and the offer is well worth taking advantage of.

ELECTRIC MOTORS.—This pamphlet is devoted to a brief consideration of motors directly connected to machinery; geared motors not flexibly suspended, driving lathes, drills, etc.; geared motors, flexibly suspended and the electro-magnetic safety coupling. The descriptive matter is accompanied by line drawings and perspectives of several examples of each class above mentioned.

AIR COMPRESSORS AND COMPRESSED AIR APPLIANCES.—Clayton Air Compressor Works, Brooklyn, N. Y. Office, Havemeyer Bldg., New York city. Pamph.; 6 × 9 ins.; pp. 106.

This is an illustrated catalogue and price list of the well-known Clayton Air compressors, rock-drills, pneumatic tools, fuel oil burners, and other appliances using compressed air.

THE "GASOLEUM" MACHINE.—Johnson Temperature Regulating Co., 240 Fourth Ave., New York city. Pamph.; 6 × 9 ins.; pp. 34.

This pamphlet describes a machine for carburetting air with gasoline, which may be used for household and other gas-lighting purposes. The gas made by this machine may be used either in the Welsbach or in the ordinary form of gas burner.

DIRECT VOLTMETERS AND AMMETERS.—Weston Electrical Instrument Co., Newark, N. J. Pamph., 9 × 6 ins.; pp. 32.

This is a descriptive circular briefly outlining the points of excellence of "Weston" instruments, giving the various uses to which they can be put. A rather complete price list is included, and the last 10 pages are given up to testimonial letters.

ENGINEERING AND SURVEYING INSTRUMENTS.—Peter Heer, 232-234 E. Washington St., Chicago. Pamph.; 9¼ × 6¼ ins.; pp. 48; illustrated.

This is a detailed illustration and description of instruments made or supplied by Mr. Heer, with prices attached. These includes transits and levels of all classes, sextants, rods, tapes, barometers, planimeters and drawing room furniture.

MULTIPOLAR GENERATORS AND MOTORS.—Siemens & Halske Electric Co., Chicago, Ill. Pamph., 10 × 7⅝ ins.

This pamphlet describes and illustrates the well-known outside armature generator manufactured by this company, and gives a number of half-tones of its machinery as installed and operated in several railway and lighting plants in this country.

GEAR LIST AND POWER TRANSMITTING MACHINERY.—The Stillwell-Bierce & Smith-Vaile Co., Dayton, O. Morocco flap, 7 × 4½ ins.; pp. 415.

This handy book contains a very full list of gear patterns, pulleys, couplings, clutches, etc., including grooved pulleys for rope transmission. About 100 pages are devoted to tables of information concerning transmission of power by shafts, belting, ropes, etc.

MEMORANDUM BOOK.—The Smillie Coupler & Mfg. Co., Newark, N. J. 4½ × 2½ ins.

This is a neat and convenient little note book, bound in morocco, suitable for the vest pocket. Interspersed with the blank pages is considerable information about the Smillie coupler. The book contains pages for addresses and cash accounts and a calendar. The company offers to send this little book to any of our readers upon request.

GRANITE.—Booth Bros. and Hurricane Isle Granite Co., 207 Broadway, New York. Paper; 7½ × 5 ins.; illustrated.

This handsomely printed catalogue photographically illustrates, in a very artistic manner, the uses to which this granite has been put; in buildings, mausoleums, etc. Views of the company's plant are also given, along with colored phototypes of polished and hammered granite from several localities.

COPPER RANGE BOILERS.—Randolph & Clowes, Waterbury, Conn. Paper, 8½ × 5½ ins.; pp. 22; illustrated.

The Brown Bros.' patent seamless drawn copper boiler, with internal spiral strengthening, is described briefly in this catalogue. The printing is in two colors, red and black, and numerous quotations from literature, science and art are introduced to add to the attractiveness of the reading matter.

A HANDBOOK OF LIBRARY FITTINGS AND SUPPLIES.—The Library Bureau, 280 Broadway, New York city. Cloth; 7 × 9⅞ ins.; pp. 148; illustrated.

This is an illustrated catalogue of special furniture and fittings for library use, and the many other details connected with the satisfactory equipment of an office or library room. The card index system is fully described, and sample cards and filing drawers and cases for different purposes are illustrated. Revolving bookcases, desks, chairs and tables receive their share of attention.

INCANDESCENT LAMPS, ETC.—The Van Choate Electric Co., Foxborough, Mass. Circular; 5½ × 7¾ ins.

This is a circular exploiting the Van Choate Company and its apparatus. It includes a number of claims for its incandescent lamp, which, to say the least, are surprising. The company also intends manufacturing motors, dynamos, street car motors and gas engines. The claimed points of excellence of its apparatus are briefly but clearly set forth.

AMERICAN PORTLAND CEMENT.—Johnson & Wilson, General Selling Agents for Saylor's Portland Cement, 45 Broadway, New York. Pamph.; 9¼ × 6 ins.; pp. 28; illustrated.

This a pamphlet devoted to setting forth the history of American Portland cement, giving directions for its use and mixing, and concluding with a short history of Eads' jetties at the mouth of the Mississippi River. Included are a number of testimonials from users of the Saylor Portland cement, along with records of tests.

METAL TILES.—Merchant & Co., Philadelphia, New York, Chicago and Brooklyn. Pamph.; 8 × 5⅜ ins.; pp. 24; illustrated.

These tiles are made of copper, galvanized steel, terne plate or zinc. They imitate in form the ornamental Spanish and gothic tiles, and are provided with a storm-proof lock. They are easily applied, are durable and much lighter than clay tile, and the numerous illustrations of structures so roofed attest their artistic appearance.

BRIDGES AND ROOFS.—The Youngstown Bridge Co., Youngstown, Ohio. Muslin; 6¼ × 4⅜ ins.; pp. 48; illustrated.

This is an announcement of the completion of the new brick and steel shops of this company built to replace those destroyed by fire on Sept. 22, 1897. The new buildings are described, and many bridges and other structures made by this firm are illustrated. The pamphlet also contains a number of tables and diagrams interesting to bridge builders.

WIRE WORKS.—Cheney Bigelow Wire Works, Springfield, Mass. Paper; 12 × 9 ins.; pp. 124; illustrated.

The designs here handsomely illustrated are furnished in brass, steel, copper or iron; silver or nickel plated; bronzed, oxidized or colored. The designs cover all manner of ornamental wickets, or counter-rails for banks and offices; grills for all purposes; gates, vault-doors and wicker-work; andirons and fenders; church and elevator-cab furniture and practically all manner of ornamental brass work, cast or in wire-work.

CHAIN HOISTS, TROLLEYS, DOOR HANGERS, ETC.—The Moore Mfg. Co., Cleveland, O. Pamph.; 6 × 9 ins.; pp. 36.

This catalogue contains an illustrated description and price list of a variety of forms of differential geared chain hoists, hand power traveling cranes, trolleys, plain or geared, for running on single-track or I-beam, with capacities up to 10,000 lbs., door hangers, door rails, etc. The Moore Mfg. Co. moved its office and plant, in Oct., 1897, from Milwaukee into the works of the HP. Nail Co., at Cleveland.

SURVEYING INSTRUMENTS.—The A. Lietz Co., 422 Sacramento St., San Francisco, Cal. Pamph.; 9¼ × 6 ins.; pp. 200; illustrated.

In addition to being a catalogue and price-list of engineering, surveying and astronomical instruments manufactured by this firm, this is also a short treatise on the care and use of these instruments. Stadia surveying is especially treated by Otto von Geldern; Hubert Vischer contributes a chapter on the principle of the logarithmic slide scale; and Mr. Lietz tells you how to recognize a good surveying instrument. Other hints and tables are given and a special pamphlet describes the Cyclotomic transit and its use in the field. This instrument has but one spindle; but it is so constructed that the transit admits of all evolutions possible with the double-center, and is designed for the most accurate work.

ELECTRICAL TESTING APPARATUS.—Queen & Co., 1010 Chestnut St., Philadelphia, Pa. Paper; 9 × 5¾ ins.; pp. 117; illustrated.

This is the sixth edition of this priced and illustrated catalogue of electrical testing apparatus made, imported and sold by this firm. These include Queen-Wirt ammeters and voltmeters, switchboard meters, the Queen-Acme portable testing set, electro dynamometers, electrical balances, galvanometers, standard cells, reading telescopes and scales, testing keys, standard coils, and a long list of other electrical testing instruments of both American and foreign designs.

NARROW GAGE RAILWAYS.—Arthur Koppel, 78-80 Broad St., New York City. Paper; oblong; 10 × 6¾ ins.; pp. 88; illustrated.

This catalogue is published in English and Spanish in parallel columns, and describes, illustrates and prices the materials manufactured by Mr. Koppel for portable and permanent narrow gage railways. These include rails metallic sleepers and fastenings, switches, turntables, wheels and axle-boxes, dumping cars of many types, platform cars, trucks, freight and passenger cars, etc. In all cases there are fully described and prices are given for the various designs.

THE WILSON WATER FILTER.—Norwood Engineering Co., Florence, Mass. Paper; 3½ × 6 ins.; pp. 11; illustrated.

This illustrated catalogue describes a mechanical filter recently put on the market by the above company. The principal claims for the filter, over others, are the use of strainer valves at the bottom that admit of using finer filtering material than would otherwise be possible; a simple valve arrangement for controlling the flow of water for washing, and a special device for governing the admission of a coagulant to the water. Both gravity and pressure filters are described.

GIRDER STREET RAILWAY RAILS.—Cambria Iron Co., Philadelphia, Pa. Cloth, 11 × 12 ins. Sections of rails.

The full-size sections here given are for various types of steel girder rails for street and electric use. The girder rails are from 6 to 9 ins. high, and vary in weight per yard from 60 to 107.5 lbs. Sections of T-rails are also given applicable for use on electric railways. The book also contains useful tables relating to the materials used in track construction. This is Vol. II. of "Rail Sections," Vol. I. being devoted to steam railway rails, running from 8 to 100 lbs. per yd.

BRIDGES AND BUILDINGS.—The Youngstown Bridge Co., Youngstown, O. Paper, 4½ × 6¼ ins.; pp. 48; illustrated.

The bulk of this catalogue is given up to half-tone illustrations of bridges and buildings constructed by the company, but an attempt has been made to make it additionally useful to the engineer by the inclusion of a number of diagrams of equivalent uniform loads, end shears, weights of through truss and deck plate girder bridges, weights of spur gearing, end reactions for swing spans, and the formulas for reactions, moments, deflections, etc., for all the ordinary forms of loaded beams.

LAGERDORFER PORTLAND CEMENT.—The Kelley Island and Lime & Transport Co., Cleveland, O. Paper, 6 × 9 ins; pp. 66; illustrated.

This handsomely printed catalogue contains a brief description of the works and materials for making this well-known brand of German Portland cement, and illustrates and describes a large number of engineering works in America in which it has been used. Among the more notable of these structures may be mentioned the Garfield Park bicycle track in Chicago, concrete sidewalk and curb construction in Kansas City, Mo.; U. S. Government locks at Rough River, Ky., and numerous tall buildings and bridge foundations in the Western States.

HELIOS LAMPS.—The Helios Electric Co., Philadelphia, Pa. Pamph., 9 × 6 ins.; pp. 48; illustrated.

This pamphlet reviews the subject of alternating arc lamps, describes the principle of the lamp manufactured under the trade name of "Helios," and illustrates the various types, such as ornamental, inverted arcs, street lamps, etc. The reactance system of series arc lighting, economy, coils, together with instructions for installing and operating these lamps and coils are given. The latter portion is devoted to direct current arc lamps for street lighting, railway lighting, interior lighting and photogravure work. Here also descriptions, tables and instructions for installing and operation are given.

ALTERNATING APPARATUS. Circular 1059.—This circular is intended to call attention to a line of alternating current generators developed during the last three years by the Walker Co. Line drawings of rotary transformers and 1, 2 or 3 phase generators are given, together with tables of dimensions, outputs, etc., of various standard styles and sizes. The machines are all of the inductor type, with stationary armatures and revolving fields, with only two collector rings used to supply the field with a direct low tension exciting current. These machines are also made compound by placing a rectifying commutator on the armature shaft and a series winding on the inductor. The pole faces and armature teeth are made of laminated steel to reduce hysteresis and eddy losses.

THE STOREY MOTOR.—The Storey Motor & Tool Co., Philadelphia, Pa. Pamph.; 5½ × 7¾ ins.; pp. 32; illustrated.

This is a neat little pamphlet illustrating the various types of ironclad dynamos and motors manufactured under the well-known trade name of "Storey." Various sizes of motors for buffing or grinding, with rigid or flexible shafts and direct connected ventilating fans and blowers, are given in the first pages. Portable drills, electric chain hoists, ash hoists, launch motors, direct connected air compressors, cars for cableways and reversing controlling boxes are also illustrated and briefly described. The latter portion of the pamphlet is devoted to outline drawings and accompany tables giving dimensions of the Storey motors and generators.

HEAVY ELECTRIC RAILWAY WORK.—Walker Co., Cleveland, O. Circular, 10⅞ × 7¾ ins.; illustrated.

This is a reprint of an article written by Prof. S. H. Short and extensively published in the electrical journals. The circular, No. 1063, is given up to the consideration of elevated electric traction. Various curves and tables obtained from actual tests are given, the whole forming a valuable collection of electric railway data.

Circular No. 1064, the second of the series on Heavy Electric Work, is devoted to the consideration of suburban traffic about Boston. In this Prof. Short points out the advantages consequent upon electric traction for suburban traffic. The data contained are quite complete and will prove interesting reading to railway men. Copies of the above may be obtained by application to the company.

DYNAMITE AND POWDER.—The Aetna Powder Company, 188 Madison St., Chicago, Ill. Paper; 8 × 5½ ins.; pp. 43; illustrated.

This firm manufactures Aetna dynamite, with from 20 to 75% nitro-glycerine, according to intended use. Aetna gelatine is another product of a plastic nature, with over 30% nitro-glycerine, well adapted for tunnel, mine, or submarine work, as it is practically free from fumes. The Aetna Contractors' Powder is claimed to be 50% stronger than the best black powder and safer to use. It can be employed wherever black powder has heretofore been used, in seamy rock, tough clay, hardpan, limestone quarries and stump-blasting. General directions are given for using and exploding these powders, in tunnelling, mining and submarine work, in blasting ice, bowlders and stumps, and for thawing out nitro-glycerine compounds.

FILTER PRESSES.—The Stilwell-Bierce & Smith-Vaile Co., Dayton, O. Pamph.; 6 × 9 ins.; pp. 52.

We quote the following description of the filter presses made by this company from the pamphlet:

> Our filter press consists of a series of round or square plates forming filter chambers, either by their concave surface or by intermediate frames. These plates and frames are inserted between a head and tail block and held in place by suitable tie-rods or side-bars. A center screw or hydraulic piston forces the head block, plates and frames together. Filtering cloths of suitable material are placed between the plates and frames, forming a tight joint on the edges. The material to be filtered is then forced into the series of chambers by means of a pump. The liquid passing through the cloth is conducted away through proper channels and outlets, leaving the solid material in the chambers in the form of a cake, the firmness and dryness of which depends upon the nature of the material and the pressure used in forcing the liquid into the chambers. When the chambers are filled the press is opened and the cakes removed.

THE WEAVER WATER FILTER.—R. T. Weaver, owner and patentee, 2925 North Broad St., Philadelphia, Pa. Small paper folders; illustrated.

This mechanical presure filter has three super-imposed beds, each containing different filtering materials, and each provided with independent means for washing. It is made in various sizes, and it is claimed for it that no coagulants are required, the filtering material effecting chemical changes in the contents of the water. The filtering material in the several compartments is described in the catalogue as follows:

> Section 1 is filled with sharp quartz, grits and iron dross or slag; the first two mentioned are the barriers to mud and vegetable matter, and the third affines with sulphate of iron and sulphuric acid solutions commonly found in river waters. Section No. 2 is filled with a fine grain of bone charcoal to remove finer particles or organisms and color. Section 3 is also filled with bone charcoal, to aid in cleansing and purifying the already clean water.

PROCEEDINGS, NEW ENGLAND ROADMASTER'S ASSOCIATION.—F. C. Stowell, Secretary, Ware, Mass. Paper, 6 × 9 ins.; pp. 105; illustrated.

This pamphlet contains a report of the proceedings, including the various committee reports and special papers presented, at the annual meeting of the association held in Boston, in August, 1897. Among the special questions discussed were the following: (1).—What is the cost of renewing ties, from the time received on the section until the last tie is removed and cleaned up? (2).—Best method of dressing single and double track in gravel ballast. (3).—Rail Joints: Experience with new devices; the mechanical, scientific and practical points in favor of same (continued from 1895). (4).—Track Tools. (5).—In which month shall the least or the greatest amount of labor be used in maintenance of track, to get the most value from the yearly total cash allowance per section or mile of track, substantiated by facts from past experience?

AMERICAN PORTLAND CEMENT.—History of the Portland Cement Industry in the United States. American Cement Co., 22 S. 15th St., Philadelphia, Pa. Paper, 9½ × 6⅞ ins.; pp. 112; illustrated.

The history referred to commences with the invention of artificial Portland cement in 1824, by Joseph Aspdice, a bricklayer, of Leeds, England, and it then takes up the work of David O. Saylor, of Lehigh Co., Pa., who, with John W. Eckert, mastered the problem in 1878 and established the first successful and commercial Portland cement works in the United States. The bulk of this catalogue, however, is taken up with the requirements and tests of American Portland cement, as set forth with the "Giant," "Egypt" and other brands. Many excellent illustrations are given of prominent structures and buildings in which these cements were used, and a large number of testimonials from users are included. Some valuable notes on the use of cement concludes the publication.

IRON AND STEEL BRIDGES AND BUILDINGS.—The Berlin Iron Bridge Co., East Berlin, Conn. Paper, 11 × 8 ins.; pp. 302; illustrated.

All but about 40 pages of this catalogue are devoted to the description and illustration of the steel and iron buildings built by this well known New England firm. The buildings illustrated include foundries, rolling mills, machine shops, paper mills, power houses, electric light and railway plants, car sheds, and structures for manufacturing establishments of all kinds. Particular attention is called to the various forms of corrugated iron fireproof doors and shutters, and to other specialties in corrugated iron construction. In the introduction the company announces that it is prepared to take contracts for iron and steel buildings, furnish all plans, superintend the erection, and turn the plant over to the owners complete. The last 40 pages of the catalogue are devoted to illustrations of various highway and railway bridges built by the company within the last few years.

ENGINEERING, SURVEYING AND MINING INSTRUMENTS.—Young & Sons, 43 N. Seventh St., Philadelphia, Pa. Boards, 9 × 6 ins.; pp. 85; illustrated.

The 15th edition of this price list is especially interesting for the excellent illustrations and descriptions of detailed parts of instruments manufactured by this firm. The completed instruments are also handsomely illustrated, and the publication closes with a sketch of the invention and introduction of the engineers' transit, to replace the old theodolite. According to this account the first transit was made by Mr. William G. Young in 1831, either for use on the State Works of Pennsylvania, or for the Baltimore & Ohio R. R.; the records are uncertain on this point. It had a vernier graduated to 3 minutes; a round level; an "out-keeper" for tallying the "outs" of the chain; a 5-in. needle and 9-in. telescope of low power. The center between the plates was flat; but the standards and levelling screws were very like those now in use. Its record for use was an unusually good one. The loose vernier and arc, for vertical angles, was subtituted for the full circle, about 1850, by Mr. Young; and the shifting staff-head was patented by him in 1858.

RIEDLER PUMPS AND AIR COMPRESSORS.—Fraser & Chalmers, Chicago and London. Catalogue No. 24, Pumps. Pamph.; 6 × 9 ins.; pp. 205. Catalogue No. 28, Air and Gas Compressors. Pamph.; 6 × 9 ins.; pp. 24.

The peculiar feature of the Riedler system of pumps and air compressors is the use of mechanically-controlled valves, which admit of much higher piston speeds than the ordinary automatic valves. Pumping engines on this system are now operated up to 700 ft. piston speed per minute. The larger of the two catalogues contains a very complete illustrated description of the different styles of pump made on the Riedler system, a very elaborate telegraphic code for orders and inquiries, and many tables and other useful information concerning flow of water, pipes, etc., together with several reports of tests of pumping engines. One of these, the Chestnut Hill, Boston, triple-expansion engine, gave a duty of over 140,000,000 ft.-lbs. per million B. T. U., and another, a cross-compound engine at the works of the Solvay Process Co., gave over 125,000,000.

The smaller pamphlet contains a description with several half-tone illustrations of blowing engines, and air and gas compressors on the Riedler system.

GARBAGE FURNACES.—Prospectus of the Thackeray Incinerating & Fertilizing Co., 401 California St., San Francisco, Cal. Paper; 5 × 7½ ins.; pp. 38; illustrated.

This catalogue bids fair to be of interest to all persons having to do with the disposal of garbage. In our issue of Nov. 29, 1894, we published an illustrated description of a Thackeray garbage furnace at Montreal. Since then a similar, but larger, furnace has been built at San Francisco. The latter furnace has 16 cells, for which the company claims a daily capacity of 20 tons, making a total of 320 tons per day, or 300 tons with one cell out of use for any purpose. The Smith-Siemens plant at Philadelphia, which heretofore has been the largest garbage burning plant in this country, was designed to burn about 200 tons per day, but it is claimed that it has been operated at the rate of 350 tons a day. The pamphlet under review contains a report on a test of the Thackeray plant at Montreal and a pretty full description of the Thackeray furnaces at San Francisco. The company claims both of these plants burn garbage without fuel, after once being lighted; and that the San Francisco plant has been run three months, at an average expense of less than 20 cts. per ton of garbage burned. This figure does not include capital charges.

THE PNEUMATIC DESPATCH TUBE SYSTEM of the Batcheller Pneumatic Tube Co. By B. C. Batcheller, B. Sc., M. E.; Philadelphia: J. B. Lippincott Co.; 7 × 9½ ins.; cloth; pp. 147.

This should not be called a trade publication, for in reality it is the only book published which treats the subject of pneumatic tubes in a practical way and affords an opportunity to see what has been done in recent years towards the rapid transmission of mail or light packages through tubes using air pressure. Chapter I. is devoted to a historical review of the subject. It starts at the beginning of pneumatic tube work in 1667 with a scheme suggested by Denis Papin before the Royal Society, and traces the various steps to the plants now in operation in London, Berlin and Paris. The latter part of this chap-

ter briefly outlines the work done in this country up to the time of the formation of the Pneumatic Transit Co. in 1892.

Chapter II. starts at this point and continues the history through the different periods of experimental work and installation of the first system of any size, that of Philadelphia, giving descriptions of the methods of laying the 6 in. pipe and the various details of sending and receiving apparatus. In this portion of the book frequent illustrations are given, affording a very clear idea of the operation of what, until recently, was the largest pneumatic mail tube in the world.

Chapter III. gives the general arrangements and adaptability of the system and apparatus of the Batcheller Pneumatic Tube Co. Diagramatic drawings of two station, three station and eight station lines, and detail drawings of the sending apparatus time lock, intermediate time lock, open and closed receivers and intermediate receivers are given. Air supply is explained and illustrations of blowers and compressors of different types suitable for pneumatic tube operation are included..

The last chapter is entitled "Facts and General Information Relating to Pneumatic Tubes," and can be described in no better way than by saying it is a collection of briefly stated definitions and laws pertaining to the action of compressed air in tubes or pipes.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work. Place.	See Eng News.
Mar. 3.	School building, Alva, Okla.	Feb. 17
Mar. 3.	Electric lighting, New London, Conn.	Feb. 10
	Advertised, Eng. News, Feb. 10 to 24.	
Mar. 3.	Stop cocks, valves, etc., Cleveland, O.	Feb. 10
Mar. 3.	Water bonds, etc., East Cleveland, O.	Feb. 10
Mar. 3.	Arc-light carbons, Chicago, Ill.	Mar. 3
Mar. 3.	State highway (8,900 ft.), Dennis, Mass.	Mar. 3
Mar. 4.	Sewers, Chicago, Ill.	Mar. 3
Mar. 4.	Water pipe, Chicago, Ill.	Mar. 3
Mar. 4.	Hauling water pipe, Baltimore, Md.	Mar. 3
Mar. 4.	Steel plating, St. Louis, Mo.	Feb. 10
	Advertised, Eng. News, Feb. 10 to 24.	
Mar. 4.	Bridge lumber, Richmond, Ind.	Feb. 17
Mar. 4.	County bridges, Nebraska City, Neb.	Feb. 17
Mar. 4.	Dam, Wilkes Barre, Pa.	Feb. 17
Mar. 4.	School building, Hamilton, O.	Feb. 17
Mar. 4.	Iron bridge, Georgetown, Colo.	Feb. 24
Mar. 4.	Grading, Omaha, Neb.	Feb. 24
Mar. 4.	Earth removal, Omaha, Neb.	Feb. 24
Mar. 5.	College buildings, Richmond, Va.	Feb. 24
Mar. 5.	Iron flagstaffs, St. Louis, Mo.	Feb. 10
Mar. 5.	Pumping engine, foundations, Chicago	Feb. 10
Mar. 5.	Improving road, Cincinnati, O.	Feb. 10
Mar. 5.	Fire engine, Pittsburg, Pa.	Mar. 3
Mar. 5.	Electric plant, St. Louis, Mo.	Mar. 3
Mar. 5.	Sidewalks, curbing, etc., Springfield, O.	Mar. 3
Mar. 7.	Intercepting sewers, Chicago, Ill.	Feb. 10
	Advertised, Eng. News, Feb. 10 and 17.	
Mar. 7.	School bonds ($90,000), Toledo, O.	Jan. 20
Mar. 7.	Refitting vault, Waukegan, Ill.	Jan. 20
Mar. 7.	Water-works, Oregon, Mo.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 7.	Cleaning streets, Tucson, Ariz.	Feb. 24
Mar. 7.	Brick and pipe sewers, Toledo, O.	Feb. 24
Mar. 7.	Paving, etc., Toledo, O.	Feb. 24
Mar. 7.	Timber, Minneapolis, Minn.	Mar. 3
Mar. 7.	Water pipe, Jersey City, N. J.	Mar. 3
Mar. 7.	Canal bridges (2), Rochester, N. Y.	Mar. 3
Mar. 7.	School building, Bremen, O.	Mar. 3
Mar. 7.	Water pipe, Cincinnati, O.	Mar. 3
Mar. 7.	Brick paving, Albany, N. Y.	Mar. 3
Mar. 7.	Vault, Waukegan, Ill.	Mar. 3
Mar. 8.	Electric conduits, Chicago, Ill.	Mar. 3
Mar. 8.	Boiler at water-works, Allegheny, Pa.	Mar. 3
Mar. 8.	Electrical work, Rochester, N. Y.	Mar. 3
Mar. 8.	Truss bridge, Trenton, N. J.	Mar. 3
Mar. 8.	School buildings, St. Louis, Mo.	Mar. 3
Mar. 8.	Sewer bonds, etc., Newport News, Va.	Mar. 3
Mar. 8.	Electric railway (19 miles), Buffalo, N. Y.	Mar. 3
Mar. 8.	Paving, grading, etc., Schenectady, N. Y.	Mar. 3
Mar. 8.	Electric light plant, West Point, Miss.	Feb. 24
Mar. 8.	Macadamizing, Stockton, Cal.	Feb. 24
Mar. 8.	Boiler plant, etc.,	Feb. 24
Mar. 8.	Jail building, Madera, Cal.	Jan. 20
Mar. 8.	Jail building, Grand Haven, Mich.	Feb. 10
Mar. 9.	Wire fence (60 miles), Pine Ridge, S. Dak.	Feb. 17
Mar. 9.	Tower clock and bell, Omaha, Neb.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 9.	Sidewalks, grading, etc., Buffalo, N. Y.	Mar. 3
Mar. 9.	Water pipe (5,700 tons), Boston, Mass.	Mar. 3
Mar. 9.	Water pipe, hydrants, etc., Collins, N. Y.	Mar. 3
Mar. 10.	School building, Washington, D. C.	Mar. 3
Mar. 10.	Cedar poles, for power plant, Seattle, Wash.	Mar. 3
Mar. 10.	Garbage destruction, Buffalo, N. Y.	Mar. 3
Mar. 10.	Court house, Geneseo, N. Y.	Feb. 17
Mar. 10.	Dredging, Oakland Harbor, Cal.	Feb. 3
	Advertised, Eng. News, Feb. 3 to 24.	
Mar. 10.	Hot water pump, etc., Halletsville, Tex.	Feb. 24
Mar. 10.	Railroad grading (45 miles.), Globe, Ariz.	Feb. 24
Mar. 10.	Bridge bonds ($8,000), Fincastle, Va.	Feb. 24
Mar. 10.	Pipe sewer, Spokane, Wash.	Feb. 24
Mar. 11.	Jail, Clay Center, Kan.	Mar. 3
Mar. 11.	Municipal building, Stratford, Ont.	Mar. 3
Mar. 11.	Sidewalks, Omaha, Neb.	Mar. 3
Mar. 11.	Building alterations, Winnipeg, Man.	Mar. 3
Mar. 12.	Pipe sewers, Akron, O.	Mar. 3
Mar. 12.	Coaling station, Jersey City, N. J.	Mar. 3
	Advertised, Engineering News, Mar. 3.	
Mar. 12.	Macadamizing, etc., Norwood, O.	Mar. 3
Mar. 12.	Brick paving, etc., Akron, O.	Mar. 3
Mar. 12.	Board walk, Atlantic City, N. J.	Mar. 3
	Advertised, Engineering News, Mar. 3.	
Mar. 12.	Clocks, Troy, N. Y.	Mar. 3
Mar. 12.	Pile bridge (90 ft. long), Omaha, Neb.	Feb. 24
Mar. 12.	Pipe sewer, Napoleon, O.	Feb. 24
Mar. 14.	Grading, etc., Muncie, Ind.	Feb. 17
Mar. 14.	Paving, Atlantic City, N. J.	Mar. 3
Mar. 14.	Court house, Troy, Ala.	Mar. 3
Mar. 15.	Water pipe (3,200 tons), St. Louis, Mo.	Mar. 3
Mar. 15.	School building, River Falls, Wis.	Mar. 3
Mar. 15.	School building, Vinton, Ia.	Mar. 3
Mar. 15.	House of refuge, Chatham, Ont.	Mar. 3
Mar. 15.	Court house, Orange, Tex.	Mar. 3
Mar. 15.	Brick building, Bridgeton, N. S.	Mar. 3
Mar. 15.	School building, Spokane, Wash.	Feb. 17
Mar. 15.	Steel submerged water pipe, Portland, Ore.	Feb. 3
	Advertised, Eng. News, Feb. 3 to Mar. 3.	
Mar. 15.	Electric light plant, Sophia, Bulgaria	Feb. 10
Mar. 15.	Lighting (10 years), Fort Smith, Ark.	Feb. 24
Mar. 15.	School building, Wahpeton, N. Dak.	Feb. 24
Mar. 15.	Electric railway (6 miles), Fort Smith, Ark.	Feb. 24
Mar. 15.	School building, Dodge Center, Minn.	Feb. 24
Mar. 16.	Pump (4,000,000 gall.), Ogdensburg, N. Y.	Mar. 3
Mar. 17.	Paving (23,279 sq. yds.), Ottawa, O.	Mar. 3
Mar. 18.	Brick paving, etc., Cincinnati, O.	Feb. 24
Mar. 18.	River improvements, Calcasieu River, La.	Feb. 17
Mar. 18.	Outlet sewer, Cleveland, O.	Mar. 3
Mar. 19.	Hospital building, New Orleans, La.	Mar. 3
Mar. 19.	Hospital building, Ukiah, Cal.	Feb. 24
Mar. 19.	24-in. sewer, Lima, O.	Feb. 24
Mar. 20.	Water refunding bonds, Fayetteville, Ark.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 21.	Court house, Nashville, Ga.	Feb. 17
Mar. 21.	Repairing piers, Muskegon, Mich.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 21.	Purification plant, Henderson, N. C.	Mar. 3
	Advertised, Eng. News, Mar. 3 to 17.	
Mar. 21.	Street bonds ($35,000), Wapakoneta, O.	Mar. 3
Mar. 22.	Water franchise, etc., Utica, Ill.	Feb. 24
	Advertised, Eng. News, Feb. 24 and Mar. 3.	
Mar. 22.	Water-works, Greenwood, S. C.	Feb. 24
	Advertised, Engineering News, Feb. 24.	
Mar. 22.	Electric light franchise, Utica, Ill.	Feb. 24
	Advertised, Eng. News, Feb. 24 and Mar. 3.	
Mar. 22.	Electric lights, Greenwood, S. C.	Feb. 24
	Advertised, Engineering News, Feb. 24.	
Mar. 23.	Stone and cement, Fort Hancock, N. J.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 23.	Light-house dwelling, Philadelphia, Pa.	Feb. 24
	Advertised, Eng. News, Feb. 24 and Mar. 3.	
Mar. 24.	Sewage precipitation tanks, Providence, R.I.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 24.	Electric light plant, Plum Island, N. Y.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 25.	School building, Mondamin, Ia.	Feb. 17
Mar. 26.	Pile protection, Cincinnati, O.	Mar. 3
Mar. 26.	Steam pumps (2), St. Louis, Mo.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 28.	Water-works, Holly Springs, Miss.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 28.	Electric light plant, Holly Springs, Miss.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 28.	Wharf, etc., Fort Barrancas, Fla.	Mar. 3
	Advertised, Eng. News, Mar. 3 to 24.	
Mar. 30.	Sewers, Glenville, O.	Mar. 3
Mar. 30.	Paving, Wheeling, W. Va.	Mar. 3
Mar. 30.	Repairing pier, Charlevoix, Mich	Mar. 3
	Advertised, Eng. News, Mar. 3 to 24.	
Mar. 31.	Pipe sewers, Paterson, N. J.	Mar. 3
Apr. 1.	Odd Fellows' home, Alton, Ill.	Mar. 3
Apr. 1.	Superstructure, etc., Portland, Ore.	Mar. 3
Apr. 1.	Water pipe (3,116 tons), St. John, N. B.	Feb. 17
Apr. 1.	Boiler plant, heating, etc., Baltimore, Md.	Feb. 24
Apr. 2.	School building, Brandon, Minn.	Feb. 3
Apr. 2.	Dipper dredge, Chattanooga, Tenn.	Mar. 3
	Advertised, Eng. News, Mar. 3 to 24.	
Apr. 3.	Electric lighting, Lawrenceburg, Ind.	Mar. 3
Apr. 3.	Electric lighting, Union City, Ind.	Mar. 3
Apr. 4.	Structural work, Chicago, Ill.	Mar. 3
	Advertised, Eng. News, Mar. 3 to 17.	
Apr. 4.	Boiler and pump, Fargo, N. Dak.	Mar. 3
Apr. 4.	Wharf, franchise, Summerland, Cal.	Jan. 27
Apr. 4.	Sewer bonds ($65,000), Santa Ana, Cal.	Feb. 24
Apr. 5.	County bridges, Dakotah, Ia.	Feb. 17
Apr. 6.	River work, etc., Chicago, Ill.	Feb. 17
	Advertised, Eng. News, Feb. 17 to Mar. 10.	
Apr. 6.	Channel work, etc., Chicago, Ill.	Feb. 10
Apr. 7.	Bridge (150-ft. span), Kalama, Wash.	Feb. 17
Apr. 11.	Highway bridges (2), Chatham, Va.	Mar. 3
Apr. 15.	Lock and approaches, New Orleans, La.	Feb. 17
	Advertised, Eng. News, Feb. 17 to Mar. 10.	
Apr. 30.	Town hall, Singapore, S. S.	Jan. 13
May 1.	Plans for sewage disposal, Belper, Eng.	Dec. 16
May 3.	Steel cells (4), Visalia, Cal.	Mar. 3
May 11.	County bridge, Gonzalez, Tex.	Mar. 3
June 1.	Electric lighting (10 yrs.), New Orleans, La.	Feb. 17
July 1.	Water power, Madras, India	Oct. 28
No date.	Levee work, Crowley, La.	Mar. 3
"	Electric railway bonds, Hannibal, Mo.	Mar. 3

RAILWAYS.

ARKANSAS, LOUISIANA & SOUTHERN.—This company has been organized, with a capital stock of $500,000, according to reports, to construct a railway from Minden to a connection with the St. Louis Southwestern Ry. at Stamps, Ark. F. H. Drake, Minden, La., is interested.

ATLANTA BELT LINE.—John M. Egan, Vice-Pres., Savannah, Ga., informs us that nothing has yet been decided upon with regard to the construction of the proposed belt line at Atlanta, Ga. The road will be about 9 miles long, and operated by steam.

CALIFORNIA.—J. S. Antonelle & Co., 431 California St., San Francisco, Cal., announce that they will sub-let the construction of about 40 miles of railway on American soil, in portions of from one to two miles each.

CAROLINA CENTRAL.—The legislature of South Carolina has agreed on a bill to incorporate this company, which proposes to build a railway from Augusta to Greenville, via Johnson, Trenton and Newberry, S. C.

CHICAGO, ROCK ISLAND & PACIFIC.—Press reports state that the Flick & Johnson Construction Co., of Davenport, Ia., has been awarded the contract for the grading work adjunct to the laying of double track between West Liberty and Davenport, Ia., at about $50,000. Work will commence about April 1, the track laying being done by the railway company direct. About 20 iron bridges will be erected by the Lassig Bridge & Iron Works, of Chicago, and the King Bridge Co., of Cleveland, O., the superstructures of which are now in process of construction. W. K. McFarlin, Supt. of Construction, Davenport, Ia.

DEEPWATER.—Reports state that surveys have been made and construction commenced on this proposed railway being built by the Gauley Mountain Coal Co., of Ansted, W. Va., from Deepwater to Glen Jean, Va., a distance of about 60 miles. Contracts have recently been awarded to M. N. Moorman, Jr., & Co., Lynchburg, Va.

DENTON & FEDERALSBURG.—A bill has been introduced into the Maryland legislature to incorporate this company, with a capital stock of $200,000, to construct a railway from Denton to Federalsburg, which will serve as a feeder to the Queen Anne's R. R.

DOVER & SOUTH BOUND.—The Goldsboro Lumber Co., Dover, N. C., informs us that this railway is at present only a logging road. It is intended to make Richlands the new terminal and to make connections with Kinston, N. C., with facilities to carry mail and freight.

GLADEVILLE.—The legislature of Virginia has passed a bill authorizing Gladeville township, Va., to issue bonds in aid of the construction and equipment of the main line of this railway. Emile Low, Ch. Engr., Saltville, Va.

GULF AND INTERSTATE RY. OF TEXAS.—Reports state that the Bolivar Channel & Dock Co. has been incorporated in Texas, with a capital stock of $100,000, to build terminal facilities for this railway company at Bolivar, Tex. L. E. Beadle, Ch. Engr., Beaumont, Tex.

GULF, BEAUMONT & KANSAS CITY.—Reports state that extensions of this railway will be built from Kirbyville to Lufkin, via Jasper, Tex., and from Jasper to San Augustine, a total distance of about 145 miles, of which 60 miles are said to be contracted for. John H. Kirby, Vice-Pres. and Gen. Mgr., Houston, Tex.

GULF & BRAZOS VALLEY.—This company has been incorporated in Texas, with a capital stock of $110,000; to build from Henrietta to Velasco, Tex., a distance of about 100 miles. Pres., W. A. Squires, Henrietta, Tex.; Ch. Engr., H. M. Berry, Mineral Wells, Tex. Further official information may be found in our issue of Jan. 13.

HANOVER & GREAT WESTERN.—This company has been incorporated in Illinois, with a capital stock of $25,000, to construct and operate a railway from a point on the Chicago Great Western Ry., near North Hanover, to Hanover, Ill., with yards, switches, etc. The incorporators are: Jas. W. White, George Jeffers, Benjamin Eadie, Carter A. Como and Albert B. White.

HINTON, NEW RIVER & WESTERN.—Press reports state that this line will be built from Pearisburg, Va., to Charleston, W. Va., a distance of 177 miles, through a rich coal district. Pres., J. T. McCreery; Secy., W. P. Siften.

LITTLE ROCK, HOT SPRINGS & TEXAS.—Press reports state that an application for the sale of this railway, running between Little Rock and Benton, Ark., has been filed by Receiver Lonsdale in the United States circuit court.

MANAOS.—This company was incorporated in New York, Feb. 25, with a capital of $500,000, to construct and operate a steam or electric railway in the city of Manaos and elsewhere in the state of Amazonas, Brazil. The directors are: A. J. Maham, Lorain, O.; S. N. Brady, Albany, N. Y.; E. C. Mayham, C. R. Flint, W. D. Walker and E. C. Converse, of New York; J. W. Scott, Orange, N. J.; F. R. Stewart, Brooklyn; F. H. Hebblethwaite, Manaos, Brazil.

MEMPHIS & CHARLESTON.—Press reports state that this railway, which extends southeast from Memphis, Tenn., to Stevenson, Ala., a distance of 290 miles, was bought at auction, Feb. 26, by the Southern Ry., at the upset price of $2,500,000, there being no other bidders. The sale was made necessary because of default in payment of interest on the road's bonded debt.

MEXICO, CUERNAVACA & PACIFIC.—Thomas V. Lermer, of Cuernavaca, Mexico, is reported as stating that this railway will be finished from the City of Mexico to Iguala, and inaugurated May 15. The line is now in operation between Mexico and Cuernavaca, and it is proposed to reach the Port of Acapulco, on the Pacific coast, as soon as possible. C. Wheeler, Secy. and Treas., 314 Cheesman Block, Denver, Colo.; J. A. Chisholm, Ch. Engr., Mexico, Mex.

MEXICAN INTERNATIONAL.—It is reported that this company's branch line to Monterey will soon be formally opened, and the construction of the proposed extension of the main line from Durango to Mazatlan, Mexico, on the Pacific coast, commenced. Pres., Thos. H. Hubbard, 23 Broad St., New York.

MIDLAND RY. OF NOVA SCOTIA.—Fitzpatrick & Co., of New Glasgow and Windsor, N. S., have been awarded the contract for building this proposed railway from Windsor to Truro, via South Maitland and Brookfield, N. S., a distance of 60 miles. The right of way has been obtained and surveys are now being made. The capital necessary for construction has already been secured. Subcontracts are being let, and the work will be pushed forward as rapidly as possible. Mr. McCarthy, Ch. Engr., Windsor, N. S. Alfred Putnam, Director, of Maitland, N. S., also informs us that work will commence at once, and that W. G. Read will build part of the line. Pres., William Strachan, Montreal, Que.

MILFORD & DINGMAN.—At a meeting of this newly incorporated company at Milford, Pa., the directors adopted the line as surveyed between Milford and Dingman, Pa., and elected the following officers: Pres., Arthur E. Lethridge, Brooklyn, N. Y.; Secy., P. Q. Deyo, Brooklyn; Directors, W. S. Bank, P. Q. Deyo, A. V. Porter, of Brooklyn; Charles R. Fowler and James H. Thompson, Jr., of New York; E. Monthemont, A. Beeley and T. R. J. Klein, of Milford; W. K. Ridgeway and Aaron Cortright, of Matamoras, Pa.; Frank Wallace, Philadelphia, Pa.; George B. Childs, Harrisburg, Pa.

MISSISSIPPI RIVER, HAMBURG & WESTERN.—R. A. Cole, 100 William St., New York, informs us that construction is now under way for this proposed railway from Hamburg to Leland, Ark., the latter place being on the Mississippi River. A. M. Gibson, Ch. Engr., Portland, Ark.

MOBILE, JACKSON & KANSAS CITY.—Leonard Wilson, Secy., Mobile, Ala., informs us that the surveys have been made and right of way obtained for the entire length of this railway, extending from McCrary's to Jackson, via Hattiesburg, Miss., a distance of 182 miles. C. D. Smith & Co. are the general contractors. About 50 miles of road, to Merrill City, on the Pascagoula River, will be opened for traffic in 30 days; operation is now carried on to McCrary's, Miss., a distance of 30 miles. Pres., F. B. Merrill; Ch. Engr., R. F. Ezzell, both of Mobile, Ala.

MOUNDSVILLE, WEST VIRGINIA & WHEELING.—This company was incorporated in West Virginia, Feb. 27, with a capital stock of $250,000, to construct a steam railway from Mayorsville to Wheeling, W. Va. The incorporators are: P. M. Smith, A. P. Funk and C. M. Smith, of New York; H. A. Douglass, West Newton, Pa.; Wm. M. Daniell, Brooklyn, N. Y.

NEWFOUNDLAND.—Reports from St. John's, Newfoundland, state that resolutions endorsing the transfer of the railways, dock, telegraphs and coal areas of Newfoundland to W. G. Reid, the builder of the Northern & Western Government Ry., passed the lower house of the legislature, Feb. 25, by a vote of 26 to 9. It is expected that little opposition will be encountered in the upper house. Mr. Reid has guaranteed to pay $1,000,000 to the government for the faithful performance of the contract. The government is to subsidize the railway, steamer and telegraph lines, and will also give the sum of $140,000 towards the paving of the streets of St. John's. Extensive improvements are contemplated.

NORFOLK & SOUTHERN.—M. K. King, Gen. Mgr., Norfolk, Va., writes us that the survey has not yet been finished for the proposed extension of this line from Berkeley, Va., to Belle Haven, N. C., a distance of 103 miles. No action towards construction has yet been taken by the executive committee.

OGDENSBURG & LAKE CHAMPLAIN.—Judge Coxe, of the U. S. District Court, according to report, has appointed Wm. H. Comstock, of Utica, N. Y., as special

master of this railway, to sell the property of the same at public auction, in order to satisfy a suit for foreclosure brought by Stuyvesant Fish and others.

RICHMOND & BAY.—Reports state that this company has been organized, with a capital stock of $30,000, to construct a railway from Richmond, Va., to a point on the Chesapeake Bay. E. T. Crump and W. B. Lightford are said to be interested.

SANTA FE, PRESCOTT & PHOENIX.—Press reports state that Robinson & Son, of South Arizona, have been awarded the contract for building a line of railway for this company to the Big Bug mining district, to be about 40 miles long.

SIEVERN & KNOXVILLE.—This company has been incorporated in South Carolina, as a successor to the Greenwood, Anderson & Western Ry., which was sold in December by order of the U. S. Court. It is required that the line be completed between Sievern and Batesburg, S. C., within five years.

SOUTH EASTERN.—F. Gardner, Ch. Engr. of Atlantic Coast Line, Wilmington, N. C., informs us that this line has been completed from Elrod to Ashpole, N. C., 11¼ miles, and that no further extension will be made at present to Hub, 10 miles further south, though the charter granted provides for such a line. Pres., W. G. Elliott, Wilmington.

SOUTH GEORGIA.—J. W. Oglesby, Pres. and Purchasing Agent, Quitman, Ga., informs us that M. Brice, of Tallokas, Ga., is building a seven-mile line from Tallokas to Baning, a station on this railway, which runs from Quitman to Heartpine. An extension of 25 miles, north, may be made this year, but nothing definite has yet been decided upon. Joel Mable, Ch. Engr., Heartpine, Ga.

WEBSTER SPRINGS.—Reports from Kingwood, W. Va., state that Webster county has voted an issue of $10,000 in bonds to aid in the construction of this proposed branch of the West Virginia & Pittsburg R. R. For notice of incorporation, see Engineering News of Dec. 30.

WILMINGTON SEA COAST.—George R. French, Pres., Wilmington, N. C., informs us that it is proposed to extend the present track for about ½ to ¾ of a mile. But little grading, filling or other work will be required. The engineer is now laying off and staking out the way.

STREET AND ELECTRIC RAILWAYS.

PORTSMOUTH, N. H.—Reports state that the aldermen, Feb. 26, voted to grant the Portsmouth Horse R. R. Co. permission to operate its lines by electricity. The Portsmouth & Dover R. R. Co., which is leased by the Boston & Maine R. R. Co., was refused the right to build an extension through this city, which was also to be operated by electricity.

AMESBURY, MASS.—E. R. Briggs, of Amesbury, informs us that the Amesbury & Hampton St. Ry. Co., which contemplates the construction of an electric street railway between Amesbury and Seabrook via Hampton Falls, is not yet organized. A franchise has been applied for.

MIDDLETOWN, CONN.—E. W. Goss, Supt. Middletown St. Ry. Co., informs us that no extensions to this line are at present contemplated; nor is it likely that an extension will be built to Glastonbury, as reported.

BROOKLYN, N. Y.—It is reported that the Brooklyn Elevated R. R. Co. has awarded a contract to the Walker Co., of Cleveland, O., for the equipment of 150 of the railway company's cars with Walker motors. Arrangements have also been made with the Sprague Electric Elevator Co., 20 Broad St., New York, for the use of its system of multiple-unit control. George B. Carroll, Ch. Engr. Brooklyn Elevated R. R. Co., 31 Sands St., Brooklyn.

BALDWINSVILLE, N. Y.—The Baldwinsville & Liverpool Ry. Co. was incorporated Feb. 15, with a capital stock of $150,000, to operate a street surface railway, 13 miles long, from Baldwinsville to Syracuse. The directors are: William H. Hoffman, Stiles, N. Y.; J. C. Kenyon, Walter McMullin, B. C. Meays, E. C. Munroe and J. H. Blanchard, Baldwinsville; R. S. Hoffman, Phoenix, N. Y.; Bartlett Smith and G. A. Mann, Syracuse, N. Y.

BUFFALO, N. Y.—Bids are asked until March 8, according to reports, for the construction of 19 miles of track for the Buffalo, Aurora & Hamburg Ry. Co., between the above-mentioned towns. Walter Phelps, of Buffalo, has been awarded the contract for the material to be used, consisting of 1,250 cedar poles, 61,000 ties, 20,000 ft. of oak lumber, 50,000 ft. of yellow pine and 100,000 ft. of hemlock. It is also said that contracts will soon be let for 12 steam construction cars, equipped with 35-HP. motors. U. L. Upson, Gen. Mgr.

FRANKFORT, N. Y.—Beckwith & Quackenbush have been granted a franchise by the village board to construct an electric railway through this place. A $10,000 bond was required.

HURLEYVILLE, N. Y.—Press reports state that a stock company is being formed at Hurleyville, with Michael Smith as president, for the purpose of building an electric line to Loch Sheldrake. It is hoped to have the road in operation by June 1.

NEW ROCHELLE, N. Y.—The village trustees gave a hearing, Feb. 28, to consider the applications for franchises made by the New Rochelle Electric R. R. Co., the Huguenot Electric St. Ry. Co., and the Westchester Electric Ry. Co. The application of the New York, Westchester & Connecticut Traction Co., being informal, was not acted upon. The franchise was finally given to the Westchester Electric Co., which is said to be in reality a part of the Third Ave. R. R. Co., and the Union Ry. The Union Ry. Co.'s lines now extend from the Harlem River through West Farms, Mount Vernon and to the village of North Pelham. The company says that it will begin in 30 days to extend the line from North Pelham, through Pelham Manor to New Rochelle, and that the present horse car lines owned by it in New Rochelle will be equipped with electricity. The route from Mount Vernon and Pelham will be the Pelham Road, and will afford access to Glen Island and Hudson Park.

PORT JERVIS, N. Y.—C. J. Fields, Vice-Pres. and Ch. Engr., Port Jervis Electric St. Ry. Co., 30 Broad St., New York, informs us that this line will be extended in the spring. Four miles of road are already in operation. A franchise for the proposed extension was granted to the company on Feb. 10, and it requires that the road be completed by Dec. 31, 1900.

WHITE PLAINS, N. Y.—It is announced that the New York, Elmsford & White Plains Ry. Co. has been permitted to increase its capital stock from $60,000 to $300,000. The company operates an electric railway from Tarrytown to White Plains, and proposes to extend to Mamaroneck, on the Long Island Sound.

TRENTON, N. J.—The Ewing Passenger Ry. Co. was incorporated in New Jersey, Feb. 25, with a capital stock of $12,500, to build an electric road in Ewing township, a suburb of Trenton. The incorporators are Henry C. Moore, Judge Robert S. Woodruff, B. Frank Abbett, Peter E. Hurley, J. H. Solomon, W. S. Gulick and F. P. Nipper, of Trenton.

CHESTER, PA.—Press reports state that the Chester Traction Co. has begun surveys for the proposed extension from Marcus Hook to Wilmington. Other improvements are projected. J. D. Rostron, Ch. Engr., 4th and Pennsylvania Sts.

EAST PITTSBURG, PA.—The council of this place has granted a franchise to the North Braddock St. Ry. Co. for a double track railway across Bessemer Terrace to the Westinghouse Electric Co.'s works. This is practically a continuation of the Braddock Electric Ry., and it is understood that the two companies are to be merged. E. B. Kimberley is president of the new company, and F. E. Proctor secretary.

M'KEESPORT, PA.—Corcoran & Connell, of Pittsburg, Pa., inform us that the contract for building an extension of the line of the Versailles Traction Co., of McKeesport, was awarded to John C. McIntyre & Co., of McKeesport, and not to them. This latter company has also been given the contract to build five miles of electric railway for the Youghiogheny Valley Passenger Ry. Co., from Boston to Buena Vista, including the power house and road complete. We are further informed that John P. McIntyre & Co. desire to communicate with lumbermen and sub-contractors.

NEW KENSINGTON, PA.—The New Kensington St. Ry. Co. was incorporated Feb. 23, with a capital stock of $12,000, to build a line from New Kensington to Parnassus, a distance of 1.8 miles. The incorporators are T. A. Mellon, Jr., W. L. Mellon, F. M. Ross, C. T. Marsh and W. S. Mitchell, of Pittsburg.

PHILADELPHIA, PA.—The Standard Traction Co., of this city, was incorporated Feb. 21, with a capital stock of $1,000. The incorporators are Maynard L. Young, Edwin F. Morse, E. Morse, William S. Doran, J. Howard Reber and William F. Sullivan.

READING, PA.—It is reported that the Mount Penn Gravity R. R. Co. has decided to equip its line, running to the top of Mount Penn, with electricity, and that the power will be furnished by one of the electric companies of Reading. W. B. Harper, Gen. Mgr., Reading.

WILMINGTON, DEL.—The Wilmington & Chester Traction Co. was incorporated in New Jersey Feb. 19, with a capital stock of $2,000,000, with $1,000 paid in. The new company has secured an option on and will purchase the street railways of Wilmington, Del., and Chester, Pa. The incorporators are Henry C. Moore, Pres. Trenton Passenger Ry. Co.; Henry A. McCarthy, Ridley Park, Pa.; G. Richard Nichols, Germantown, Pa.; Clarence Sill, Darby, Pa.; Charles Martindale, Camden, N. J.

NEWPORT NEWS, VA.—John L. Watson, of Portsmouth, informs us that the organization of the Chesapeake & Hampton Roads R. R., recently incorporated, has not yet been fully completed.

RICHMOND, VA.—A bill has been introduced in the Virginia Legislature to incorporate the Deep Run Ry. & Electric Co., for the building of an electric street railway in this city. The incorporators named are T. A. Cary, W. M. Parrish, A. V. Shelton, Warren H. Mercer, T. D. Newell, R. A. Patterson and A. R. Courtney.

PARKERSBURG, W. VA.—L. G. Hallock & Co., of Wheeling, W. Va., have been awarded the contract for building about 7½ miles of electric railway for the Parkersburg Gas, Electric Light & St. Ry. Co., as advertised in Engineering News. Estimated cost, about $100,000. Pres., C. H. Shattuck.

OBION, TENN.—W. B. Southgate, Ch. Engr. Obion & Tiptonville Transit Co., Nashville, Tenn., informs us that the preliminary surveys have been made for this proposed line from Obion to Tiptonville, via Glass, Hornbeak and Samburg, a distance of 25 miles. Estimates are not far enough advanced as yet to ask for bids. The proposed line crosses Reelfoot Lake, and will require from six to eight miles of pile trestle work. Pres., W. W. Wilson, Obion, Tenn.

DAYTON, O.—Dr. Lowes, Pres. Dayton & Western Traction Co., advises our representative that work on this line from Dayton to Eden, O., 26 miles, has been considerably delayed, but that it is expected to begin operation about April 15. About 24 miles have been graded, 7 miles of rails have been laid, 10 miles of wire are up, and the roof is now being put on the power station, located at Alexandria, 6 miles from Eaton and 20 miles from Dayton. The L. Schreiber & Sons' Co., of Cincinnati, O., furnished the steel work for the power house. Six 42-ft. cars are being built by C. G. Kuhlman, Cleveland, O.; Peckham double trucks will be used. J. B. Crankshaw, E. E., is in charge of the construction work for the E. P. Roberts Co., of Cleveland, the mechanical engineers; the Osborn Co., of Cleveland, is doing the civil engineering; the Buckeye Engine Co., Salem, O., has the contract for the two 400-HP. engines; and the Stilwell-Bierce & Smith-Vaile Co., Dayton, O., will furnish the pumps, and Siemens & Halske, of Chicago, have the contract for the generators.

TROY, O.—The Troy, Tippecanoe & Dayton Interurban Electric Ry. Co. has filed an application with the commissioners of Miami county for a franchise to build over the Troy Pike. Pres., Col. V. A. Taylor, of Cleveland.

SANDUSKY, O.—The Sandusky, Castalia & Crystal Springs Ry. Co. has been incorporated in Ohio, with a capital stock of $25,000, for the construction of a railway from Sandusky to Port Clinton, O. The incorporators are C. O. French, F. P. Zollinger, A. J. Peters, W. E. Guerin, Jr., and Clark Rude.

TIFFIN, O.—The Tiffin, Fostoria & Eastern Electric Ry. Co. was incorporated in Ohio Feb. 26, with a capital stock of $175,000.

SAUGATUCK, MICH.—The Saugatuck, Douglas & Lake Shore Ry. Co. has been incorporated, with a capital stock of $120,000, to build an electric line from Saugatuck to New Richmond to connect with the Chicago & West Michigan Ry. A franchise has already been granted to this company to build through this village.

MINNEAPOLIS, MINN.—Our correspondent informs us that the Minneapolis & Anoka Electric Suburban Ry. Co. has filed articles of incorporation, with a capital stock of $100,000. This line is about 18 miles in length, and it is claimed that it will be built in connection with the dam at Corn Creek, for which the Twin City Rapid Transit Co. was recently granted permission by Congress. The incorporators are Henry Lee, I. A. Caswell, A. E. Giddings, Theodore and John Coleman, John Dunn, Hiram Thornton, O. L. Cutter and Frank Hart, of Anoka.

HANNIBAL, MO.—S. W. Chance, 14 South Broad St., Philadelphia, Pa., Ch. Engr. Hannibal, Palmyra & Suburban Traction Co., informs us that the surveys have been completed and the right of way obtained for the proposed electric line through Hannibal to Palmyra, to be 19½ miles in length. Bids for bonds will be received as soon as a few details are arranged. Pres., D. Thompson, Hannibal.

SONORA, CAL.—Surveys are now being made, according to reports, for the construction of an electric railway between Jamestown and Sonora. T. S. Bullock is said to be interested.

ST. JOHN'S, NEWFOUNDLAND.—An electric railway will probably be built in this city soon by W. S. Reid, as a part fulfillment of a contract to be made with the government and which contemplates extensive improvements in the railway system, docks, etc., of Newfoundland.

ELECTRIC LIGHT AND POWER.

EXETER, N. H.—The question of issuing $25,000 in bonds for constructing a plant will be voted upon at the town meeting March 8, according to reports.

NEW BEDFORD, MASS.—We are informed that no definite action is likely to be taken this year in regard to the proposed municipal plant. H. P. Jenney, Chn. Com.; W. F. Williams, Cy. Engr.

WATERBURY, CONN.—Press reports state as follows: A New York syndicate proposes to obtain control of the water power of the Housatonic River and use it to drive an electric plant two miles above Shelton, Conn., with which to furnish power to the factories and trolley roads in the cities and towns in the state west of the Connecticut River. It is understood that Standard Oil men are leaders in the enterprise. James C. De Long, of New York, an electrical engineer and an agent of the company, has been in Waterbury for several days in consultation with Superintendent Sewell, of the Waterbury Traction Co. and with the heads of the principal factories here and in Bristol, Hartford, Meriden, New Britain and Berlin. Mr. De Long's name in not in the New York directory.

BUFFALO, N. Y.—D. K. Ramey, Altoona, Pa., writes us that he knows of no new contracts to be let for work on the plant of the Buffalo Falls Power & Land Co., noted as incorporated in our issue of last week.

MUMFORD, N. Y.—It is reported that the plant of the Mumford Electric Light Co. was partly destroyed by fire Feb. 20. C. C. Harris and George Stewart may be able to give information.

PIKE, N. Y.—The question of granting a franchise to Wm. Powers will be voted upon at the next election.

RENSSELAERVILLE, N. Y.—The Kinderhook Light & Power Co. will probably soon begin the construction of the proposed plant for lighting this place, according to reports. Thos. S. Chubb, of Skinner & Arnold, Troy, may be addressed.

ROCHESTER, N. Y.—Bids are asked until March 8 for electrical work in the rifle range at the state armory, Rochester. Benj. Flagler, Ch. Ordnance, Albany.

SALEM, N. Y.—Jas. H. Houghton, Secy. Salem Electric Light & Power Co., writes us that the poles, buildings and wires for the plant are in place. Machinery from S. Morgan Smith & Co. and the Westinghouse Electric Mfg. Co. will be used; estimated cost, $14,000. Des. Engr., E. W. Philo, Salem.

WATERVLIET, N. Y.—An election was held March 2 to vote on the question of issuing $16,000 in bonds for improving the plant. City Clerk Day, West Troy, may be addressed.

RAHWAY, N. J.—N. M. Osborn, Chn. Com., writes us that the question of erecting a plant has been deferred until decision is secured relative to improvements at the water-works. F. W. Langstroth and U. D. Gibbons are on the committee.

VINELAND, N. J.—W. Macgeyl, Cy. Clk., writes us that no definite steps in regard to the proposed plant have yet been taken.

PHILADELPHIA, PA.—The committee has recommended to the councils that bids be asked at once for the electric lighting for 1899, and also that the director of public safety furnish the council with estimates for a municipal arc light plant. Wilson H. Brown, Chn. Com.—Bids are reported as being received for erecting a power house at 30th and Walnut Sts. for the Allison Mfg. Co.

PITTSBURG, PA.—The Allegheny County Light Co. is reported by local papers to have decided upon plans for the proposed substations. A meeting of stockholders will be held March 8 to decide details. Vice-Pres. and Gen. Mgr., S. H. Blaxter.

PERKASIE, PA.—The council is reported to have granted a franchise to a company to light this town.

SHARON, PA.—Wallis & Carley are reported to have been awarded the contract for constructing a new brick power-house, 40 × 80 ft., by the American Steel Casting Co., at $4,000.

HAGERSTOWN, MD.—Press reports state as follows: Powell Evans, who sold his plant in this city to the Hagerstown Electric Ry. Co., stated Feb. 14 that he had not sold the several miles of river-bottom from Weverton to the Frederick county line, but that he intended to develop the project of furnishing power to this and other towns by building a dam across the Potomac River. Mr. Evans has just been granted by the Virginia legislature the privilege of furnishing power south of the Potomac. Wm. Jennings and Christian W. Lynch are reported as interested in the Hagerstown Electric Ry. Co. A light and power station will be built.

WILMINGTON, DEL.—It is stated that F. Blumenthal & Co. will erect a plant for the Kent Building, etc.

MARION, VA.—A. T. Lincoln, Recdr., writes us that B. W. Dinsmore, Marion, has secured a franchise for lighting this city. The plant will consist of 400 incandescent lights of 16 c. p. Mr. Dinsmore will probably put in a dynamo and plant for 35-HP. wheel at the factory and later build a dam to secure 70 HP.

SUFFOLK, VA.—John B. Norfleet, Chn. Com., writes us that the proposed plant, to be operated by steam, will have about 50 arc and 2,000 incandescent lights; estimated cost, $20,000. J. W. Hosier and Wm. N. McAnge are on the committee.

WYTHEVILLE, VA.—The owners of the plant have decided to change the plant from an arc lighting system to that of an incandescent system.

DALTON, GA.—B. C. Briings, Cy. Clk., writes us that the council proposed to call an election in March or April to vote on the question of issuing bonds for a plant and a sewerage system.

ATHENS, TENN.—The question of constructing a plant is reported as being considered by the council.

HARRIMAN, TENN.—Estimates are reported as being considered by D. W. Thomas for a plant of 1,500 incandescent lights.

MOUNT PLEASANT, TENN.—The proposed plant, noted in our issue of last week, will include a 300-light dynamo, four arc lights, etc. Ambrose L. Lanier may be addressed.

FRANKFORT, KY.—A bill is before the legislature providing for the enlargement of the plant at the Frankfort penitentiary.

MARION, KY.—This place is to have a plant, according to reports.

FREEPORT, O.—A bill is before the legislature authorizing this place to raise money for the construction of a plant.

SPRINGFIELD, O.—C. A. Shuster, Secy. Com., writes us that the committee wishes to secure all possible information in regard to electric light plants.

SYCAMORE, O.—G. L. McKibben, Cy. Engr. of Van Wert, O., has begun to prepare the plans for the combined electric light plant and water-works, to cost about $20,000.

TOLEDO, O.—Local papers state that Councilman James is interested in a proposed plant for the east side.

UNION CITY, IND.—Bids are asked by the city clerk until April 3 for lighting the city with electricity. The present contract expires July 1. S. R. Bell, Mayor, writes us that bids will be asked on two plans, one on which the contractor will furnish everything, and the other the contractor to furnish all but the boilers and steam, the city to furnish the latter from the water-works. Population, (1890), 2,681.

LAWRENCEBURG, IND.—Bids are asked until April 3 for lighting the city for five years, either with electricity or gas, both on the 12 o'clock and all-night schedules. Geo. W. Fitch, Cy. Engr., writes us that there are gas and electric light plants, the city now being lighted by electricity. Population, 6,000.

VEEDERSBURG, IND.—Chas. M. Berry, Pres. Council, writes us that Chas. O. Ellis, Cy. Engr. of Kansas City, Kan., has the contract for constructing a plant and water-works for this place. The plant will have 20 arc lights of 1,200 c. p., and 500 incandescent lights of 16 c. p.; estimated cost, $25,500. The plants are to be in operation by July 1.

FENTON, MICH.—The plant of the Fenton Electric Light & Power Co. was offered for sale March 2. The company recently secured a 20-year exclusive franchise. Clarence Tinker, Receiver.

GRAND RAPIDS, MICH.—F. A. Twamley, Secy. Bd. Pub. Wks., writes us that Nagle & Ball, Monadnock Block, Chicago, Ill., have been selected as consulting engineers for the proposed municipal plant; estimated cost, from $100,000 to $125,000. Alderman Emmer, Chn. Com.

PETOSKEY, MICH.—D. D. Whitten, Cy. Clk., writes us that an election will be held April 4 to vote on the question of constructing a plant to cost $6,000. The city will secure boiler capacity and power from the water-works. The plant will require, however, an engine, dynamo and wiring. There will be 30 arc lights of 2,000 c. p. and 300 incandescents of 16 c. p. W. S. Spencer, Pres. Bd. Pub. Wks.

PORT HURON, MICH.—F. F. Rogers, Cy. Engr., writes us that on Dec. 6 a franchise was granted to S. L. Merriam, E. F. Percival and Chas. Wellman, all of Port Huron, to construct and operate a plant. So far it is not known of there being any steps taken towards constructing the same. The present plant was destroyed by fire in December, but the dynamos were replaced in a temporary building and service resumed after a week's delay. Plans for a new building have been prepared by Geo. L. Harvey, Port Huron. It will be built at once. The old plant is for both light and power. The power is furnished to electric railway. Steam power, overhead wires. Capacity required for about 150 arc lights of 2,000 c. p. Secy. and Gen. Mgr., W. F. Davidson.

CHICAGO, ILL.—Bids are asked until March 8 for constructing 192 brick manholes, 64,289 ft. of 3-in. tile and 3,218 ft. of 1½-in. steel pipe for the electric light conduits in Humboldt, Boulevard and Park; and also for furnishing and laying 18,764 ft. of lead covered cable in old conduits and 8,623 ft. in new conduits, 8,100 ft. of cable for pole wires, 162 lamps to be connected, etc. J. W. Suddard, Pres. West Chicago Park Comrs., Union Park; E. G. Schubert, Secy.

CHICAGO, ILL.—Bids are asked until 11 a. m. March 3 for furnishing 500,000 arc-light carbons, to be delivered in lots of 100,000; check, $500; bond, $5,000. E. B. Ellicott, Cy. Electrician, City Hall.

BANGOR, WIS.—It is reported that a company is being organized to erect a plant.

BALDWIN, WIS.—Arthur Peabody is reported to have been granted a franchise.

ELROY, WIS.—Press reports state that this place is considering the question of building a plant.

WAUSAU, WIS.—J. B. Sherman, of the committee, writes us that the committee wishes to secure estimates for a municipal plant of 80 arc and 250 incandescent lights. There will be required about 46,000 ft. of wire.

WEST SUPERIOR, WIS.—The council has voted to authorize Mayor Starkweather to appoint a committee of five to consider the advisability of building a municipal plant to cost about $70,000.

BOONE, IA.—The council has voted to submit the question of constructing a plant to the voters at the next election.

NEOLA, IA.—We are informed that at the meeting of the council March 3 arrangements will be made for the construction of the plant for which bonds were voted Feb. 14, as noted in our issue of last week. The town is not in debt. Estimated cost, $5,000. W. H. Killpack, Mayor.

WATERLOO, IA.—It is reported that stock is being subscribed for the proposed plant.

GAYLORD, MINN.—An election will be held March 8 to vote on the question of building a plant.

ORTONVILLE, MINN.—We are informed that Patrick Dougherty, 610 West 7th St., St. Paul, Minn., was awarded the contract Feb. 23, at $15,190, for constructing the plant and water-works complete. The other bidders were as follows: Electric light plant complete, Fort Wayne (Ind.) Electric Corporation, $3,375; W. I. Gray & Co., Minneapolis, $3,340; General Electric Co., New York, $3,940. Power-house complete, J. A. Shannon, Graceville, Minn., $1,241; Chas. Newman, Ortonville, $1,050. Chas. H. Keith, Cy. Recdr.

PINE CITY, MINN.—It is stated that this place may vote on the question of constructing a plant at the spring election.

ZUMBROTA, MINN.—I. S. Moe, of Moeville, Wis., is reported as interested in a proposed plant for this place.

MANDAN, N. DAK.—It is stated that C. E. V. Draper has applied for a franchise for lighting this place by electricity.

BASIN, MONT.—The construction of a plant is proposed by parties from Anaconda, Mont.

KANSAS CITY, MO.—The council is considering the question of granting a 30-year franchise to Cornelius S. Sweetland, Providence, R. I., Benj. Friedberg, Kansas City, Kan., and R. J. Ingraham, Kansas City, Mo. Work must be begun on the plant within 90 days after the granting of the franchise.

ST. LOUIS, MO.—Emmet Thoroughman, attorney-at-law, and Jas. H. Bethune, contractor, of St. Louis, are reported as interested in a power plant on the Meramac River, near Pacific, Mo. The plan comprises the building of a dam across the bed of the Meramac River near Pacific. The wall of the dam is to be 6 ft. high, and the water sluiced so as to give a fall of 17 ft. to the point where the turbines are to be located. The power will be distributed for a distance of 40 miles.——The Imperial Electric Light, Heat & Power Co. is constructing and equipping with machinery a building at 10th and St. Charles Sts., for furnishing about 100,000 lights. The building will be 86 × 142 ft.

ST. LOUIS, MO.—Bids are asked until March 5 for erecting a light and power plant at the board of education building; deposit, $500. Wm. B. Ittner, Comr. School Bldgs.

BENTONVILLE, ARK.—I. C. Casey, Cy. Recdr., writes us that a franchise has been granted to Atkins & Ellis (Chas. O. Ellis, Cy. Engr.), of Kansas City, Kan.

WINNSBORO, TEX.—We are informed that the Winnsboro Electric Light & Power Co. wants bids at once for furnishing dynamos, wire, etc., for its proposed plant of 750 incandescent lights of 16 c. p.; estimated cost, $4,000. Secy. and Treas., C. H. Morris.

LAKE CITY, COLO.—Press reports state that officials of the Standard Oil Co., New York, will soon begin the construction of a plant on Lake Christoval, to furnish this place and the mines in Hinsdale county with power; estimated cost, $150,000.

STERLING, COLO.—H. C. Sherman writes us that it is expected to secure a vote of the citizens on the question of issuing bonds for the proposed plant and water-works. Should the vote be favorable, plans will be wanted at once.

SEATTLE, WASH.—Bids are asked until March 10 for furnishing and delivering 36 to 40 ft. cedar poles along the transmission line of the Snoqualine Falls Power Co. between the falls, Tacoma and Seattle. The power plant is estimated to cost about $500,000. Consult. Engr., T. T. Johnston, Security Bldg., Chicago, Ill.; Wm. T. Baker, Board of Trade, Chicago, may be addressed.

SAN RAFAEL, CAL.—An electric light company will soon be incorporated by Paul R. Jarboe. The power-house will be in the eastern part of the town, and wires will be strung to San Quentin, Larkspur, Rose Valley and other places near by. Eventually the company will construct an electric railway.

STOCKTON, CAL.—The supervisors of San Joaquin, Contra Costa and Alameda counties have been asked to grant a franchise to a company, recently organized, to convey power from the Blue Lakes electric plant to San Francisco, a distance of 140 miles, according to reports. S. D. Woods, attorney-at-law, and T. S. Bullock are interested.

WOODLAND, CAL.—It is stated that the trustees received no bids Feb. 15 for the sale of a light franchise. The citizens are said to be still making an effort to secure a company who will accept a franchise.

MESA, ARIZ.—Arrangements are reported as being made for lighting this place from the plant of the Consolidated Canal Co., of Phoenix.

COBURG, ONT.—The council is reported as considering a proposition from Mr. Wickstead for furnishing power from Baltimore Creek, the plant for which is estimated to cost about $55,000.

ESSEX, ONT.—Wm. Newman, Fleming Block, Windsor, Ont., is reported as preparing plans for the proposed plant.

MARKHAM, ONT.—The plant and water-works were partly destroyed by fire Feb. 16, causing a reported loss of $3,500. The plant is owned by W. J. Fletcher, Alliston, Ont.

JUIS DE FORA, BRAZIL.—The Westinghouse Electric & Mfg. Co., Pittsburg, Pa., is reported to have been awarded the contract for furnishing a plant at this place for the Campanhia Mineira de Electricidade. The plant will have a capacity of 5,000 HP. A similar contract for furnishing machines for a plant at Bello-Horynite has been awarded to the Westinghouse company. Pres. and Consult. Engr., Bernardo Mescarenhes.

NEW COMPANIES.—Meyersdale Electric Light, Heat & Power Co., Meyersdale, Pa.; $10,000; Hugo Lorentz, Frank Rosenberger, S. D. Livengood, Meyersdale; Harvey M. Berkley, J. A. Berkeley, Somerset, Pa. The secretary informs us that the company is buying the plant already in operation. There is wanted, however, a new boiler.

Citizens' Electric Co., Eureka Springs, Ark.; $25,000; W. M. Duncan, Pres.; A. R. Sayle, L. P. Badger.

Kitson Hydrocarbon Heating & Incandescent System Co., Sheffield, Ala.; $5,000; W. R. Brown, A. B. Cook, Jr., B. B. Cohen, J. H. Nathan.

Columbia Electric Power Co., Valatie, N. Y.; $100,000, all paid in; Charles Wild, Wm. H. Wild, Geo. M. Pinney.

BRIDGES

SPRINGFIELD, MASS.—The question of constructing a new steel bridge, to replace the old toll bridge, over the Connecticut River, to cost about $250,000, is being considered by the legislative committee on roads and bridges, according to reports.

ROCHESTER, N. Y.—Bids are asked until March 7 for constructing bridges over the Erie Canal at South Clinton St. and Monroe St. Geo. W. Aldridge, Supt. Pub. Wks., Albany.

BUFFALO, N. Y.—The Buffalo Dredging Co., Buffalo, has been awarded a contract at $7,497 to construct a bridge over the Erie Canal at Hamilton St.

SYRACUSE, N. Y.—A bill has been introduced in the assembly to permit this city to raise $12,000 for the construction of a steel girder bridge across the Erie Canal at Westcott St.

PENN YAN, N. Y.—Senator Sheppard has introduced a bill to appropriate $1,500 for repairing the iron bridge over the outlet of Crooked Lake.

TRENTON, N. J.—Bids are asked by the board of freeholders until March 8 for constructing a low truss rivet bridge over Eight Mile Run Creek, on the Rosedale road, in Lawrence township. N. H. Furman, Chn. Com.

MONTROSE, PA.—It is reported that James McKinney, John R. Budd, W. H. Bates, Benjamin Maxey and E. F. Ames have been appointed a committee to consider the question of constructing a bridge over the Lackawanna River. L. D. Benson, County Surv.; E. G. Ball, Clk.

WASHINGTON, D. C.—The district commissioners awarded a contract to Jas. C. McGuire, Feb. 3, for widening the P St. bridge over Rock Creek.

CHATHAM, VA.—Bids are asked by the supervisors of Pittsylvania county, until April 11, for the building of a highway bridge over Pigg River. Address T. L. W. Gray, of Toshes, Va.——Bids are also asked, until April 11, for erecting a highway bridge at Markham Ford, the main span of which will be 100 ft., the approach on the west side 96 ft., and on the east side 36 ft., with piers 24 ft. high. A. C. Brown, of Peytonsburg, Va., and G. A. Creasy, of Mount Airy, Va., may be addressed.

WALKERTON, VA.—Reports state that the Walkerton & Mataponi Bridge Co. is to be incorporated.

NORFOLK, VA.—Press reports state that the Atlantic City local board of improvement will ask the legislature for permission to issue $65,000 in bonds to construct a bridge across Smith's Creek.

COLUMBIA, S. C.—The county commissioners have applied to the legislature for permission to construct a bridge across the Tugallo River near Jenkin's Ferry.

COVINGTON, KY.—A bill will be prepared and submitted to the legislature authorizing the construction of the proposed Y viaduct over the railway tracks at Harrison Ave.

JACKSON, MISS.—Reports state that the question of constructing a bridge 100 ft. wide and 100 ft. long is being considered by the council.

AKRON, O.—It is reported that plans have been submitted for the construction of a viaduct 276 ft. long across the tracks at Mill St.; estimated cost, $50,000.

CINCINNATI, O.—Estimates amounting to $250,000 have been submitted to the board of administration by H. J. Stanley, Cy. Engr., for the proposed viaduct, 1,241 ft. long and about 50 ft. wide, having 15 spans, to be constructed at Harrison Ave.

CINCINNATI, O.—Bids are asked until March 26 for constructing a pile protection for the south abutment of the Wayne Ave. bridge, at Carthage fair grounds, Springfield township. Eugene L. Lewis, County Audr.

LORAIN, O.—L. A. Fauver, Cy. Engr., is reported to have received plans for a lift bridge to be constructed by Scherzer Rolling Lift Bridge Co., Chicago, Ill., at an estimated cost of $90,000, over the Black River at Erie Ave. It will be 136 ft. long.

DETROIT, MICH.—Reports state that permission has been granted to the Rapid Railway Co. to construct a trestle six miles long over the flats.

SAGINAW, MICH.—The following are the lowest bidders for constructing a bridge over the Saginaw River at Court St.: John J. Granville, Saginaw, substructure, $15,873; Milwaukee Bridge & Iron Works, Milwaukee, Wis., superstructure, $26,429; Toledo Bridge Co., Toledo, O., trestle-work, excavating and filling, $13,911.

ANOKA, MINN.—The county commissioners propose to call an election to vote on the question of issuing about $20,000 in bonds for constructing a bridge over the Rum River, according to reports.

LAMOURE, N. DAK.—Press reports state that the contract for constructing bridges over Cottonwood Creek and Maple Creek will be awarded in April.

ST. LOUIS, MO.—Plans have been approved by the committee of government engineers for the proposed bridge to cross the Mississippi River at Mullanphy St.

GONZALES, TEX.—Bids are asked by the county commissioners until May 11 for constructing an iron, steel or wire bridge across the San Marcos River, at Slayden. W. W. Glass, County Judge.

MARLIN, TEX.—An iron bridge is to be constructed across the Brazos River, at Rock Dam Crossing, six miles from here, to cost about $16,000, according to reports.

ASTORIA, ORE.—Reports state that W. H. Miller, County Supv., is preparing plans and will receive bids at once for constructing a bridge across Nelson Creek.

OAKLAND, CAL.—The board of supervisors has passed a resolution authorizing County Surveyor Bostaph to prepare plans for a concrete arch bridge to replace the old Lewelling bridge.——The Phoenix Bridge Co., Philadelphia, Pa., has been awarded a contract to construct a steel bridge on masonry piers across the estuary at Harrison St.; estimated cost, $90,000.

OAKLAND, CAL.—Cotton Bros., Oakland, will probably receive the $1,000 premium for their plans for a steel bridge, with an automatic draw, to span the estuary at Webster St.; estimated cost, $60,000. Arthur Brown, County Engr.

AMELIASBURGH, ONT.—It is reported that a bridge to cost about $2,000 will be constructed between Huff's Island and Massassaga Point.

BUILDINGS

WATERVILLE, ME.—Reports state that the trustees of Colby University have voted to erect a chemical laboratory at a cost of about $35,000. Pres., Nathaniel Butler, D. D.

NEWTON, MASS.—H. P. Cummings & Co., of Ware, Mass., are said to have received the contract for erecting four brick additions to the hospital building in this town, at a cost of $40,000.

SPRINGFIELD, MASS.—We are informed that the contract has not yet been awarded for the new museum of science building to be erected in this city by the City Library Association. About $30,000 has already been appropriated, and the plans prepared. Archs., Gardner, Pyne & Gardner, 33 Lyman St.

BINGHAMTON, N. Y.—A fire in this city, Feb. 21, destroyed the brick building, at 161 Washington St., causing an estimated loss of $40,000; insurance, about $18,000.

BROOKLYN, N. Y.—It is reported that plans are being prepared for twelve dwelling houses to be erected in this city for W. C. Donnellen, 44 Rutland Road; estimated cost, $120,000. Arch., Robert Dixon, 219 Montague St.

BUFFALO, N. Y.—Plans have been prepared for a 3-story flat and store building, to cost about $55,000, by Louis J. Eckel.——The erection of a 10-story boulding for the accommodation of fraternal societies is said to be contemplated. Archs., Brown & Brown, 1326 Prudential Bldg.

NEW YORK, N. Y.—Plans are being prepared, according to reports, for a 16-story store and loft building to be erected at 728 and 730 Broadway, for Henry Hilton, of 280 Broadway; estimated cost, $50,000. Arch., Edward H. Clark, 10 West 23d St.——The Brown Building, a 5-story iron-front structure, at 142 to 150 Worth St., occupied by the Eclipse Painting Co., the Columbia Press Association, and others, was damaged by fire Feb 26; estimated loss, $50,000.——Plans have been filed by the city for a 3-story and attic brick and stone engine-house, at 42 and 44 Great Jones St., to cost, $120,000. Archs., Flagg & Chambers, 35 Wall St.; by Matilda M. Bruce, 810 5th Ave., for an 8-story brick and steel store and loft building, at 87 Maiden Lane, to cost $110,000. Archs., Jordan & Gillir, 19 Park Place; by Schmeidler & Bachrach, 31 Nassau St., for three 6-story brick flat and store buildings at 195 to 199 East 2d St., to cost $81,000. Arch., G. F. Pelham, 503 5th av.; by Anselm & Bruck, 267 West 123d St., for five 5-story brick flat buildings n 82d St., west of Amsterdam Ave., to cost, $132,000. Arch., G. F. Pelham, 503 5th Ave.; by Edward B. Fellows, for nine 2-story frame dwellings, on Tinton Ave., near 165th St., to cost $40,500. Arch., Wm. H. Hopkins, 1669 Jefferson Ave.; by B. L. Curtis and others, for a 7-story brick flat building at 161 and 163 West 36th St., to cost $60,000. Arch., Wm. J. Dilthey, 1 Union Square; by Isaac Marx, 118 1st Ave., for three 6-story brick flat and store buildings, at 284 to 288 3d St., to cost $55,000. Archs., Horenburger & Straub, 122 Bowery; by A. & H. Cohen, 232 Henry St., for a 6-story brick flat and store building, at Market and Monroe Sts., to cost $50,000. Archs., Schneider & Herter, 48 Bible House.

SANDY HILL, N. Y.—Plans are being prepared, according to reports, for a 3-story brick hotel and opera house to be erected on the site of the Coffee House. Arch., W. E. Lawrence, Opera House Block.

TROY, N. Y.—Bids are asked by the commissioners of Rensselaer county, until March 12, for a system of clocks for the new county court house in this city. Clk. Comrs., Wm. M. Keenan; Archs., M. F. Cummings & Son, Times Bldg.

JERSEY CITY, N. J.—Bids are asked by the Erie R. R. Co., 21 Cortlandt St., until March 12, for the construction of a coaling station in this city, as stated in our advertising columns.

CHESTER, PA.—William Provost, Jr., of Chester, has been awarded the contract for erecting the new bank building for the Chester National Bank, on Market St., near 5th St., at $33,500. The building is to be completed by Oct. 1.

FERNWOOD, PA.—The Fernwood Mansion, a 4-story frame hotel building, was destroyed by fire Feb. 26, causing a loss of about $45,000.

LEHIGHTON, PA.—J. C. Sendel, of Weatherly, has been awarded the contract for constructing a freight transfer station at this place, to be nearly 800 ft. long, for the Lehigh Valley R. R. Co.

PHILADELPHIA, PA.—Bids are asked, according to reports, for the construction of thirty-six 2-story brick dwellings at 18th and Venango Sts., to cost about $125,000. Contractor, Frank C. McCooley, 1345 Arch St.

PITTSBURG, PA.—Our correspondent informs us that the 9-story brick building, which was burned on Feb. 18, and which was occupied by the National Wall Paper Co., will be rebuilt at once by the owner, T. U. Gillespie. The walls remain uninjured.

WASHINGTON, D. C.—Frank L. Hauvey has been awarded the contract for the construction of the 7-story office building to be erected for the trustees of the Columbian University on the site of the old law library on 5th St., to cost about $75,000.——Geo. S. Cooper, 16 Baltic Bldg., has prepared plans for a 4-story apartment house, 60 × 80 feet, to be erected on 14th St., between Wallach and U Sts., N. W.; estimated cost, $30,000.

WASHINGTON, D. C.—Bids are asked by the district commissioners, until March 10, for constructing an 8-room school building on Marshall St., Mount Pleasant.

SAVANNAH, GA.—The following bids were received Feb. 21 for the erection of a hall in this city for the Knights of Pythias: A. C. Scott, Savannah, $17,379; J. R. Eason, Savannah, $17,350; Stewart Contracting Co., Savannah (accepted), $16,821.85.

TROY, ALA.—Bids are asked until March 14 for the erection of a court house, to cost about $10,000. W. J. Hilliard, County Clerk; R. L. Jones, Arch., 51 Inman Bldg., Atlanta, Ga.

NEW ORLEANS, LA.—Bids are asked by the administrators of the Charity Hospital, until March 19, for erecting the Richard Milliken Memorial Hospital for Children, on Tulane Ave., between South Robertson and Magnolia Sts. Secy., Edwin Marks; Archs., Sully, Burton & Stone Co., 1103 Hennen Bldg.

BREMEN, O.—Bids are asked until March 7 for constructing a new school building in this village. David Hendricks, Pres. Bd. of Education.

CHILLICOTHE, O.—The Peck-Williamson Heating & Ventilating Co., of Cincinnati, O., has been awarded the contract for installing a heating and ventilating system in the Jackson Ave. School, at $897.

CINCINNATI, O.—Contracts have been let, according to reports, for erecting a new 3-story brick and stone building for the Cincinnati Oyster & Fish Co., on Carr St. A refrigerating and an electric plant will be installed. Estimated cost, $40,000. Archs., Boll & Taylor, 5th and Walnut Sts.

GRAND RAPIDS, MICH.—The question of issuing $50,000 in bonds for the erection of a new insane asylum building will be voted upon at the next election of Kent county.

PETOSKEY, MICH.—D. D. Whitten, Cy. Clk., informs us that the city will vote on the proposition of erecting a city hall on April 4. W. S. Spencer, Pres. Bd. of Pub. Wks.

ALTON, ILL.—Bids are asked until April 1 for the erection of an Odd Fellows' home, at this place. Address J. H. Raible.

CHICAGO, ILL.—Plans are being prepared for an 8-story stone building to be erected at Lake and Market Sts., for the Garrett Biblical Institute, of Evanston, Ill.; estimated cost, $250,000. Archs., D. H. Burnham & Co., The Rookery.

CHICAGO, ILL.—Bids are asked by Henry Ives Cobb, Arch., Chicago Bldg., Washington, D. C., until April 4, for all the labor and materials required for structural work and inclosing of the U. S. Building in this city; deposit required, $50,000, as stated in our advertising columns.——Plans have been prepared, according to reports, for an addition to the Home for Incurables, on Ellis Ave., near 55th St., to cost about $35,000. Archs., Frost & Granger, 806 Temple Bldg.

PEORIA, ILL.—We are informed that plans will be prepared for the new asylum building to be erected in this city by W. H. Reeves; Engr., Jacob A. Harman, both of Peoria.

WAUKEGAN, ILL.—Bids are asked by the board of supervisors until March 7 for the refitting of the vault in the Lake county court house. Address W. H. Dodge, Chn. Com., 136 Washington St., Waukegan.

RIVER FALLS, WIS.—Bids are asked until March 15 for the erection of a normal school building at this place; deposit required, $1,000. Address the Board of Regents of Normal Schools, Madison, Wis.; Arch., William Waters, Oshkosh, Wis.

DES MOINES, IA.—The Des Moines Elevator Co. informs us that it will probably be 30 days yet before it will fully decide upon the location of the new elevator which it contemplates erecting.

OTTUMWA, IA.—J. A. Wagner, Secy. Bd. of Education, informs us that the Northern Building Co., of Minneapolis, Minn., has been awarded the contract for erecting the new high school building in this city, at $42,319; not including heating and plumbing. The plumbing was let to the Union Iron Works, of Ottumwa, whose bid was $1,640. This latter company also bid lowest for the steam heating, at $5,595. Arch., Clinton C. Nourse, Office Bldg., Des Moines, Ia.

VINTON, IA.—Bids are asked until March 15 for a brick high school for this place, to cost about $25,000. Archs., R. G. Kirsch & Co., Builders' & Traders' Exchange, Milwaukee, Wis.

CLAY CENTER, KAN.—Bids are asked by the commissioners of Clay county, until March 11, for the erection of a sheriff's residence and jail at this place. Archs., J. C. Holland & Co., 727 Kansas Ave., Topeka, Kan.

OMAHA, NEB.—The following bids were received by the supervising architect, Washington, D. C., Feb. 24, for two hydraulic passenger elevators, one hydraulic mail lift, and one hydraulic ash lift, including pumps, tanks, piping, cars, platforms, etc., for the U. S. Building in this city:

Bidder.	Hydraulic.	Electric.	Time, days.
Morse, Williams & Co., Philadelphia.	$14,995	......	120*
Eaton & Prince Co., Chicago, Ill....	10,116	$9,000	120
Central Iron Wks., Quincy, Ill.......	9,500	7,900	140
Otis Bros. & Co., New York	13,300	11,000	90
Crane Elevator Co., Chicago, Ill....	11,000	8,500	90
Standard Elev. & Mfg. Co., Chicago.	12,000	9,486	..

* Working days.

KINGSTON, MO.—An election will soon be held in this city to vote on the question of erecting a new court house, at cost of about $18,000.

ST. JOSEPH, MO.—The Badger Block, at 10th and Francis Sts.,and the Calhoun Mantel Co.'s works, were destroyed by fire Feb. 24; reported loss, $50,000.

ST. LOUIS, MO.—Bids are asked by the board of education, 9th and Locust Sts., until March 8, for the erection and completion of the Eliot and Sherman School buildings; deposit required, $1,000. Address Wm. B. Ittner, Comr. School Bldgs.

ORANGE, TEX.—Bids are asked by the commissioners of Orange county, until March 15, for the erection of a fireproof court house; deposit required, $2,500. S. Chenault, County Judge; Glover & Allen, Archs., Mason Block, Houston, Tex.

TACOMA, WASH.—The board of education is considering the advisability of erecting a new high school building, to cost about $75,000.

PORTLAND, ORE.—Bids are asked by the supervising architect, Washington, D. C., until April 1, for the foundation, superstructure, roof covering and approaches of the U. S. custom house building in this city.

VISALIA, CAL.—Bids are asked by the board of supervisors, until May 3, for placing four steel cells in the county jail.

CHATHAM, ONT.—Bids are asked, until March 15, for erecting a house of refuge for the county of Kent. J. C. Fleming, County Clk.

STRATFORD, ONT.—Bids are asked, until March 11, for erecting a municipal building, except the heating, in this city; deposit required, $250. Geo. F. Ingram, Chn. of Market and Police Com.; Harry J. Powell, Arch., Stratford.

WINNIPEG, MAN.—Bids are asked by D. B. Dick, Arch., 17 Toronto St., Toronto, Ont., until March 11, for alterations to the Richardson Building, at Main and McDermott Sts., in this city.

BRIDGETON, N. S.—Bids are asked by S. S., E. and H. Ruggles, until March 15, for erecting a 2-story brick building, 68 × 50 ft., on Queen St.

WATER-WORKS.

DEXTER, ME.—P. H. Coombs, Bangor, Me., has been engaged to make surveys and plans for domestic works, according to reports. Population (1890), 2,732.

BOSTON, MASS.—Bids are asked until March 9 for furnishing 5,700 tons of cast iron water pipe; bond, $20,000. J. R. Murphy, Water Comr.

NANTUCKET, MASS.—It is stated that at the town meeting Feb. 21 it was voted not to purchase the works of the Wannacomet Water Co. for about $56,500. It was also decided to indefinitely postpone the question of building a stand-pipe. A. T. Mowry, Chn. Com.

QUINCY, MASS.—The council is reported to have appropriated $30,000 for extending the mains. Supt., J. T. Cavanagh.

WESTFIELD, MASS.—Smith Bros., Pelhamville, N. Y., have been awarded the contract for laying water pipe, as advertised in Engineering News. The bids are given under Contract Prices.

WESTERLY, R. I.—It is proposed to purchase a number of hydrants for fire protection.

MERIDEN, CONN.—It is proposed to pave the 400-ft. raceway at the bottom of the incline at the works at Kenmere. Mayor Ives may be addressed.

NEW LONDON, CONN.—W. H. Richards, Engr. Water and Sewer Dept., writes us that short extensions will be made to the mains and sewers this season.

SEYMOUR, CONN.—Theo. B. Beach, Secy., writes us that subscription books for stock of the Seymour Water Co. were opened last week and about $9,000 subscribed. The capital stock will be $50,000. It is proposed to build without the issuance of bonds and upon a paid in capital.

BUFFALO, N. Y.—Mayor Diehl has signed the bill authorizing the issue of $500,000 in bonds to build a new pumping station. Bids will be asked by the board of public works for engines, boilers and other apparatus.

COLLINS, N. Y.—Bids are asked until March 9 for furnishing and laying water pipe, gate valves and hydrants for the water supply at the hospital. Address F. J. Blackmon, 626 Ellicott Square, Buffalo.

NYACK, N. Y.—James S. Haring, Engr., Nyack, has prepared plans and estimates of cost for constructing new and revising old systems of pipes for the villages of South Nyack and Upper Nyack for the board of water commissioners of the village of Nyack, who control the works in these villages, as follows: In South Nyack for entire new works, 10.50 miles, $53,200, or for revising and enlarging old system, $44,885, including new reservoir and motor. For Upper Nyack, for entire new system, 8.15 miles, $37,717, or for least necessary extensions, $1,728. The question of raising money for these improvements in whole or in part will be submitted to the people at the charter election on March 15. But little work has been done up to this time on the filter construction at West Nyack; it will probably be completed the coming season.

OGDENSBURG, N. Y.—Bids are asked until March 16 for furnishing a 4,000,000-gallon pump. H. A. Lord, Supt. Water-Wks.

PRATTSBURG, N. Y.—It is proposed to construct works, at a cost of $12,000, according to reports. J. F. Witmer, C. E., 705 Ellicott Square, Buffalo, has been giving data.

ST. JOHNSVILLE, N. Y.—The legislature has authorized this city to issue $12,000 in bonds for completing the plant. Supt., Arch. Allen.

JERSEY CITY, N. J.—Bids are asked until March 7 for furnishing 1,600 lengths of 4 to 20-in. pipe, 20-in. branches, etc. Wm. A. Tolson, Clk. pro tem.

OCEAN CITY, N. J.—The People's Water Co. has been incorporated with a capital stock of $100,000 by Geo. Pfeiffer, Jr., contractor; Geo. Barrett, J. Clarence Coxey and J. Rufus Eastlake, all of Camden, N. J.

OCEAN CITY, N. J.—Press reports state that the council has advertised for bids for furnishing the city with water and lights, the contracts to begin on June 1, notwithstanding the fact that the Ocean City Association holds contracts with the city for furnishing these commodities for a number of years to come.

RAHWAY, N. J.—N. M. Osborn, Chn. Lamp Com., writes us that the water-works may be enlarged by the construction of a stand-pipe, filter plant and the renewal of engines and boilers, which have been in operation for 25 years.

VAILSBURG, N. J.—Alexander Maybaum, Mayor, writes us that $40,000 in bonds will be issued for the purchase of the existing works and for making extensions. It is intended to secure water from Newark.

ALLEGHENY, PA.—Bids are asked until March 8 for installing a 250-HP. boiler at the Howard St. pumping station. Robt. McAfee, Dir. Pub. Wks.

HARRISBURG, PA.—The construction of the proposed filtration plant at the state lunatic hospital will be begun in April or May, according to reports. The plant is intended to filter about 400,000 gallons of water daily. Superintendent Orth may be addressed.

LEBANON, PA.—Hallock & Kinney, Wheeling, W. Va., are reported to have been awarded the contract for furnishing this city with a supply of 1,000,000 gallons a day at $21,000.

LINESVILE, PA.—The Bunday Water Co. has been incorporated with a capital stock of $10,000 by Frank E. Bunday, Milton C. Robinson, Chas. S. Gehr and others. The plant was built in 1896.

PITTSBURG, PA.—The Clinton Iron & Steel Co., Carson St., wil build a new pumping station with a capacity of 10,000,000 gallons of water daily. It is to replace the old pumping station removed to allow the enlargement of the Pittsburg and Lake Erie yards, and will cost $35,000. The Wilson-Snyder Mfg. Co. has the contract for furnishing the two duplex engines of 5,000,000 gallons each at $12,000.

WILKES-BARRE, PA.—Bids are asked by the Spring Brook Water Supply Co. until March 4 for constructing a new dam near Yatesville, as stated in our issue of Feb. 17. The reservoir will be constructed in a deep ravine. At the point where the wall is to be built the distance between opposite mountains is 11,000 ft. The wall will be 75 ft. high and when the reservoir is filled the water will extend for fully a mile between the mountains. Gardner Creek is separated from Worden Creek, on which the company now has a reservoir at the point where the new reservoir is to be built, by a chain of mountains nearly two miles wide. The reservoir on the former is to be constructed nearly opposite that built last summer on the latter and the stone for the retaining reservoir will be brought from the same quarry, if need be, by building a railway about one mile in length. The reservoir is to be built much the same as the other, with a wall 14 ft. thick at the base and 3 ft. thick at the top. The supporting wall of earth, however, is to be much heavier and will contain about 200,000 cu. yds. The dam will contain 770,000,000 gallons of water. The building of this reservoir will cost at least $125,000. The other one cost about $150,000. The company now has control of the water supply to all the towns in the valley. Work will begin about April 1.

BALTIMORE, MD.—Bids are asked until March 4 for hauling about 7,700 tons of 6 to 48-in. water pipe, etc.; check, $200. N. S. Hill, Jr., Ch. Engr. Water Bd.

BOONSBORO, MD.—It is stated that the officials decided not to accept the proposition of H. G. Frederick, Millersburg, Pa., for water-works, noted in our issue of last week; estimated cost, $10,000. J. C. Brining, Burgess.

HENDERSON, N. C.—Bids are asked until March 21 for furnishing a water purification plant for the works of the Henderson Water Co., as stated in our advertising columns. J. H. Bledgers, Supt. and Treas.

WILMINGTON, N. C.—Local papers state that C. L. Parker, Ithaca, N. Y., has been awarded the contract by the Clarendon Water-Works Co. for completing the sinking of an 8-in. artesian well 2,500 ft. at Hinton. The contract was awarded in September to Jas. Storey, Wheeling, W. Va., who recently abandoned it. Supt., W. F. Robertson.

AMERICUS, GA.—City Clerk and Treasurer Davis writes us that the city has won in the injunction case to restrain it from issuing $30,000 in bonds for works and a sewerage system. J. B. Ansley, Cy. Engr.

CALHOUN, GA.—An election will be held March 26 to vote on the question of issuing $12,500 in bonds for works, according to reports. Population (1890), 690.

M'RAE, GA.—The construction of works is being considered, according to reports. Population (1890), 800.

MONTGOMERY, ALA.—The council has voted to pass the ordinance authorizing the issuance of bonds for the construction of municipal works over the mayor's veto. Consult. Engr., Nisbet Wingfield, Augusta, Ga.; Mayor, Jno. H. Clisby; Pres. Bd. Aldermen, E. B. Joseph.

OCEAN SPRINGS, MISS.—J. J. Kuhn, owner of the water supply, writes us that the only extension to the works will be pipes for fire protection. The water is supplied by an artesian well 850 ft. deep. Population, 2,500.

RUSSELLVILLE, KY.—It is reported that this place will make another effort this season to secure works.

BARBERTON, O.—John M. McNamara, Barberton, writes us that the proposed works will cost about $10,000. No franchise has yet been granted. The work will probably be completed by Aug. 1.

BARNESVILLE, O.—This place wishes to grant a franchise for supplying it with water. Estimates, etc., are wanted at once. Population, 4,000. H. E. Dement, Clk.

BLOOMVILLE, O.—J. F. Walker, Mayor, writes us that plans and specifications for works have been prepared by W. D. Boyce & Co., 1009 Chemical Bldg., St. Louis, Mo. It is expected that the question of building the works will be submitted to the voters at the spring election. Population, 1,000.

CINCINNATI, O.—Bids are asked until March 7 for furnishing and laying cast-iron water pipe valves, castings, etc., for a line from Glenway Ave. to the hospital in Green township. Jno. Fehrenbatch, Supt. Cincinnati Hospital, Cincinnati.——Within a few days the water-works commission will ask for bids for two contracts for the new water-works. One of the contracts will be for the construction of the intake pier, pump pits and driver tunnel; estimated cost, $500,000. The other contract will be for the construction of the gravity conduit tunnel under the Turkey bottoms; estimated cost, $900,000.

COLUMBUS, O.—The question of issuing $175,000 in bonds for erecting a dam in the Scioto River for an additional water supply will be voted upon by the citizens at the election April 4. Julian Griggs, Ch. Engr.

ELYRIA, O.—It is stated that Elyria Gas & Water Co. has submitted a proposition to furnish this city with a better supply. The committtee, composed of E. E. Will-

iams, Eugene Mussey, Hall Clough and W. E. Miller, are securing information. Bids were asked last July for building works to cost about $250,000, but on account of the Supreme Court declaring the election in 1896 illegal, nothing further was done.

GENEVA, O.—A report on works to cost $35,000 has been submitted. Plans and specifications have been completed by Paul Voorhees, 1210 Guaranty Bldg., Buffalo.

MARTIN'S FERRY, O.—The council proposes to call an election to vote on the question of issuing $35,000 in bonds for new machinery, according to reports. Supt., Chas. S. Moore.

MOUNT VERNON, O.—The Union Iron Works, Erie, Pa., is reported to have submitted the lowest bid Feb. 14 for furnishing two new boilers for the water-works at $1,290. Supt., C. W. Koons.

SYCAMORE, O.—G. L. McKibben, Cy. Engr. of Van Wert, O., is preparing plans for the proposed works and light plant to cost about $20,000. No further information can be given at this time. Population, 1,000.

UHRICHSVILLE, O.—Local papers state that the Dennison Water Supply Co. is preparing plans for a filtration plant near the pumping station. Work will begin as soon as the weather permits. Treas., Murray Forbes, Greensburg, Pa.; Supt., S. F. Potter.

THORNTOWN, IND.—The question of building works is being considered, according to reports. Population (1890), 1,530.

VEEDERSBURG, IND.—Chas. M. Berry, Pres. Council, writes us that the contract for building works and a light plant has been awarded to Chas. O. Ellis, Cy. Engr. of Kansas City, Kan., at about $25,500. The improvements are to be completed by July 1.

WINCHESTER, IND.—Wm. S. Diggs, Mayor, writes us that the election held in this city Feb. 8 to vote on the question of works was carried by 10 majority. At an election held about three years ago the majority was 17. The council failed to take any notice of the first election and it is reasonable to suppose that even less notice will be taken of the recent one, as it is understood that a majority of the council is opposed to constructing works. Mayor Diggs thinks that nothing will be done this year.

ST. CLAIR, MICH.—Jas. W. Inches, Health Officer, is reported to have recommended the extension of the water intake further into the St. Clair River. Supt., C. J. Streit.

YALE, MICH.—It is reported that the town will make a contract with Mac Walker for a water supply. Jas. McCall, Pres. Comrs.

CHICAGO, ILL.—Bids are asked until March 4 for furnishing the material and laying water pipe in three avenues. L. E. McGann, Com. Pub. Wks.

ELGIN, ILL.—A. A. Parkin, Supt., informs us that the following bids were received, Feb. 26, for constructing water filters of 500,000 gallons, the contract not yet being let:

O. H. Jewell Filter Co., 73 W. Jackson St., Chicago..	$4,715
Jackson Filter Co., St. Louis......................	*2,700
Continental Filter Co., 44 Wall St., New York......	5,900

*And $4,030 and $2,400, respectively.

KANKAKEE, ILL.—Press reports state as follows: John B. Reed, formerly Supt. Kankakee Water-Works Co., was appointed receiver, Feb. 24, on application of holders of second and third mortgage bonds. The total indebtedness consists of $175,000 bonds. Foreclosure was ordered on $75,000. A new filter plant and repairs approximating $20,000 will be installed by the receiver.

NORMAL, ILL.—We are informed that the following contracts were awarded Feb. 22 for constructing works, as advertised in Engineering News: Brick and stone work, F. A. Leighton, Normal, $3,300; laying pipe line, John M. Healey, Chicago, $8,637; gasoline engine (F. O. B. Normal), Fairbanks, Morse & Co., Chicago, $1,100; duplex power pump, Deane Steam Pump Co., Holyoke, Mass., $810, and deep-well pump, Goulds Mfg. Co., Seneca Falls, N. Y., $701. The steel work on the tower will be put in by the council at a cost of $1,200. The Chattanooga Foundry Co., Chattanooga, Tenn., will supply the pipe through John M. Healey, of Chicago, who has the contract for laying the pipe line. The Rensselaer Mfg. Co., Troy, N. Y. will furnish the valves and hydrants through the same contractor. The power to be employed is a gasoline engine. The work of construction will begin at once and will be supervised by George C. Morgan, Ch. Engr., New York Life Bldg., Chicago. The contract was awarded to Watson Stewart, of Normal, at $2 per foot for the digging for the artesian well, the town to furnish the casing. The work of sinking the well will begin at once and continue until water supply is found. E. H. Vencill, Clk.

ODELL, ILL.—Bids are asked until March 17 for constructing works to consist of 2,070 ft. of 4 to 10-in. pipe, 1,000 lbs. of special castings, six hydrants, a 50 HP. tubular boiler, an air compressor, an air lift pump of 135,000 gallons capacity daily, a steel tower 100 ft. high supporting a 40,000-gallon tank, etc.; estimated cost, $7,000. F. W. Francis, Village Clk.

BEDFORD, IA.—A. J. Somers, Mayor, writes us that this place is not now talking of constructing works, as reported in our issue of last week.

DES MOINES, IA.—L. Higgins, Cy. Engr., has completed plans and submitted a report to the council for the proposed municipal works, to cost about $1,400,000. It is intended to supply a city of 200,000.

OTTUMWA, IA.—Abram Wing, Supt. City Water Supply Co., writes us that it has not been decided yet what extensions will be made to the mains.

SHELL ROCK, IA.—It is probable that this place will vote on the question of constructing works at the spring election. Population, 1,000. H. W. McGregor, Recdr.

NEW PAYNESVILLE, MINN.—This place is reported as considering the question of building works.

ORTONVILLE, MINN.—Chas. H. Keith, Cy. Recdr., writes us that the following bids were received Feb. 23 for constructing works in connection with the light plant, the bids for which are noted under its proper heading: Steam and power pump plant, complete—Richard & Potter, Minneapolis, $3,473; Crane & Ordway Co., St. Paul, Minn., $3,446; Twin City Iron Works, Minneapolis, $3,720. Stand-pipe—Chicago Bridge & Iron Works, Chicago, Ill., $2,550. Works and plant complete—Fairbanks, Morse & Co., St. Paul, $17,000; Patrick Dougherty, 610 West 7th St., St. Paul (accepted), $15,190.

WHEATON, MINN.—M. B. Haynes, Mankato, Minn., has been engaged to prepare plans for works and a sewerage system.

FORT SCOTT, KAN.—P. C. Hesser, Mayor, writes us that the city is not engaged in making any improvements, and there is no truth in the report that the city will vote to issue bonds for municipal works and a light plant, as stated in our issue of Feb. 17.

TOPEKA, KAN.—The council on Feb. 18 rejected a proposition from the Topeka Water Co. for the sale of its works to the city. It is probable that the people will be asked to vote on the question of issuing bonds for new works, although it is said the people are opposed to new works, for in a few years the property is likely to be owned by the city. Councilmen Burgess and Warner may be addressed.

NEBRASKA CITY, NEB.—A. M. Munn, Cy. Engr., writes us that the controversy between the Nebraska City Water & Light Co. and this city has been settled. All suits have been dismissed. The contract for making about 8,000 ft. 6 to 10-in. pipe extensions has been let to B. P. Egan, of Nebraska City.

OMAHA, NEB.—The Omaha Water Co. has been awarded the contract to furnish the grounds of the Trans-Mississippi Exposition with water. Gen. Mgr., E. L. Bierbower.

FARGO, N. DAK.—Bids are asked until April 4 for furnishing and installing a new boiler and pump for the works. J. Tudor Graves, Cy. Engr., is reported to have recommended the furnishing of an 80 HP. boiler and a pumping engine, to cost from $4,500 to $10,000.

BOZEMAN, MONT.—Press reports state that Judge Armstrong, of the district court, granted an injunction Feb. 25 restraining the city from selling bonds to buy the works of the Bozeman Water Works Co., a St. Paul corporation, on the ground that the city has no right under the laws of Montana to assume the bonded indebtedness of a water-works company, amounting to $102,000, but can only issue bonds for a direct purchase without assuming any incumbrance. This decision of the court sets back the proposed purchase of the works by the city for the present.

HELENA, MONT.—The plant of the Helena Consolidated Water Co. was sold Feb. 14 to John B. Clayberg, Helena, for Chas. S. Tuckerman, of Boston, Mass., and Benj. Graham, of New York. For further information see 1897 "Manual of Am. Water-Works."

GALLATIN, MO.—It is reported that the contract for constructing the works, as advertised in Engineering News, was awarded Feb. 10 to Geo. Cadogan Morgan, New York Life Bldg.. Chicago, Ill., at about $17,000. Mayor, I. Mann.

ST. LOUIS, MO.—Bids are asked until March 15 for furnishing 3,200 tons of 6 to 36-in. cast-iron water pipe, and also for laying 77,000 ft. of pipe, etc. E. S. Foster, Secy. Bd. Pub. Improvements.

WEBSTER GROVES, MO.—An election will be held March 22 to vote on the question of issuing $25,000 of 20-year 6% bonds for municipal works.

MENA, ARK.—Information is wanted in regard to furnishing a 50-ft. stand-pipe, 4 and 6-in. mains, etc., for the proposed works, which, it is reported, will be built this season at a cost of $7,000. W. W. Whitley, Cy. Clk

BEAUMONT, TEX.—P. A. Hersey, Cy. Secy., writes us that the city will issue bonds for extending the mains. Des. Engr., C. B. Daniels.

CUERO, TEX.—Bids are asked until the March meeting of council for furnishing three hydrants, valves, and a number of supplies for the works. F. W. Bates, Chn. Com.

ORANGE, TEX.—E. W. Bancroft, Chn. Com., writes us that bids were wanted until March 1 for furnishing a 60 HP. boiler, a 750,000-gallon duplex pump, a 110-ft. steel tower to support a 50,000-gallon steel tank, and 17 hydrants. All the other supplies were purchased before Feb. 21. The works complete will cost $11,000. Des. Engr., John Turner Smith, Austin, Tex.

PARIS, TEX.—J. R. Dickson, Supt., writes us that it is hoped to have matters settled in a short time in regard to the proposed new water supply. Population, 16,000. J. F. Burke, Chn. Com.; W. C. Dean, Cy. Engr.

TERRELL, TEX.—It is reported that work on the proposed improvements to the plant will begin in about 30 days. A 12-in. main will be laid in Moore Ave., and a new supply will be secured. Estimated cost, $12,000. Mayor, M. C. Roberts.

SHAWNEE, OKLA.—Benj. Dierker, Cy. Clk., writes us that this place voted Feb. 21 against issuing bonds for works to cost $10,000.

CRIPPLE CREEK, COLO.—Press reports state that the council Feb. 18 decided to submit to the voters at the next election a proposition to bond the city for $150,000 for the purchase of the works from which the city is supplied, owned by the Michigan Pipe Co., Bay City.

ELIZABETH, COLO.—This place is reported as considering the question of building works.

IDAHO SPRINGS, COLO.—The council is reported as considering plans for extending the works and securing an increased water supply. Population, 2,500.

STERLING, COLO.—H. C. Sherman writes us that it is expected to vote on the question of issuing bonds for works and a light plant at the spring election. Should the vote be favorable an engineer will be engaged at once to prepare plans. Estimated cost, $12,000. Population, 1,000.

ALBUQUERQUE, N. MEX.—Bids are asked for sinking an artesian well and for constructing a tower and tank. Edgar A. Allen, Supt. Indian School Service.

RANDSBURG, CAL.—The Randsburg Water Co. has been incorporated with a capital stock of $100,000, with all paid in. Alva E. Snow, L. L. Cory, W. C. Colson, O. L. Everts, George W. Jones and D. S. Ewing are the incorporators. The company owns the Squaw Springs wells, 4½ miles east of Johannesburg, from which a daily flow of five miners' inches of water has been secured. This can be doubled with but little more development of the wells. The company will excavate a reservoir at the top of the mountain back of the wells, and at a height sufficient to carry the water over the King Solomon divide by gravity into Randsburg. The water will be pumped into the reservoir from the wells by two or more pumps and engines. For further information see our issue of Feb. 17.

SAN DIEGO, CAL.—Bids are asked by the supervisors until April 5 for the purchase of a franchise for a 6-in. water pipe in a certain highway. B. F. Dixon recently applied to the supervisors for this franchise.

COALVILLE, UTAH.—The council is reported as considering the question of building works, which has been urged for some time by F. M. Primeo, Editor "Times."

SAN JUAN BAUTISTA, TABASCO, MEX.—The San Juan Bautista Water Co., of San Juan Bautista, Tabasco, Mexico, was incorporated Feb. 24 with a capital stock of $200,000, of which $1,200 is paid in, by Lemuel E. Miller, James E. Taylor and John Halpin, of Cape May City, N. J.

ZAMORA, MICHOACAN, MEX.—Works and a light plant will be built in this place, according to reports.

MARACAYBO, VENEZUELA.—Regarding the water supply for Maracaybo, Consul E. Plumacher reports under date of Jan. 30 that a contract has been entered into between the state of Zulia and M. A. Villarroel, civil engineer, Caracas, Venezuela, whereby the latter will supply Maracaybo with water. The state will secure the necessary land for the pipe, pumps, buildings, machinery, etc.; the contractor agreeing to build a distributing depot close to the city, and to supply 26½ gallons of water daily per inhabitant of the city. The company will charge every private subscriber for water at the rate of $2.316 per 7,925 gallons and to the government $1.93 per same quantity; the excess shall be charged for at the rate of 29 cts. per 264½ gallons. Hospitals must be supplied free up to 528 gallons a day per hospital. At the end of fifty years the works shall become the property of the city.

IRRIGATION.

ABBEVILLE, LA.—Granville B. Shaw, and E. H. Geydon, Abbeville, are interested in the proposed construction of a canal 20 miles long from this place to Geydon, to irrigate for rice cultivation; estimated cost, $200,000.

CROWLEY, LA.—J. A. Andrews & Son, New Orleans, La., have been awarded a contract for constructing about 25 miles of irrigation canals, including 300,000 cu. yds. of levee work.

LIVINGSTON, MONT.—W. S. Fortiner, Engr. State Arid Land Commission, is preparing plans for an irrigation canal 50 miles long and 20 ft. wide, to cost about $200,000, in the Yellowstone Valley, near Billings, to reclaim about 28,000 acres bordering on the Yellowstone River.

DALLAS, TEX.—Arrangements are being made to construct an irrigation canal, for which the contract has been let and the pumping plant purchased. Mlle Jeannette Stengele, S. H. Van Wormer and Frank Cooley are interested, according to reports.

PORTLAND, ORE.—Wm. S. Byers, Pendleton, Ore., will construct a canal 50 ft. wide with dams, ditches, flumes, etc., along the Unatilla River, to irrigate in the Unatilla Reservation.

WOODLAND, CAL.—Reports state that C. C. Gurrie and T. Fleming are preparing to put in a plant that will lift 1,000 gallons of water a minute, and will be operated by a 50-HP. engine. It is to irrigate an orchard in Capay Valley, near Guinda.

PHOENIX, ARIZ.—It is reported that John H. Walker, Engr., Santa Fe, N. Mex., of the Fireside Irrigation & Land Co., will commence surveys for the dam and ditch lines to be constructed in connection with water-works for Winslow. E. H. Bergmann, L. E. Merrill, S. M. Folsom.

SEWERAGE.

LONG MEADOW, MASS.—The question of building a system will be reported on at the town meeting in April. C. Stern writes us that F. B. Allen, A. S. Gates and W. W. Willard are on the committee.

NEW LONDON, CONN.—W. H. Richards, Engr. Water and Sewer Dept., writes us that short extensions will be made by day labor to the system and water mains this summer.

NORFOLK, CONN.—We are informed that Burritt Darrow, Chn., E. C. Stevens, Joseph Selden and Edmund Brown, Secy., have been appointed a committee to investigate and report on the proposed system. Des. Engr., P. L. Barker, Winsted, Conn.

AUBURN, N. Y.—It is proposed to construct a sewer in Lawton Ave. Mayor Lewis and Commissioner Laird may be addressed.

BATAVIA, N. Y.—John Holly Bradish, Comr., writes us that the authorities will be unable to submit the question of constructing a system, to cost about $25,000, to the taxpayers on March 8, as stated in our issue of Feb. 17.

MOUNT VERNON, N. Y.—Press reports state that plans are being prepared by the commissioner of public works for the erection of a building on a lot owned by the city near the Bronx River, at West Mount Vernon, and for the necessary machinery for a pumping station for the system of that section.

ROCHESTER, N. Y.—Chambers & Casey submitted the lowest bid Feb. 25 for constructing a sewer in Hague St., at $1,165. W. H. Jones & Son submitted the lowest bid, at $2,716, for a sewer in Center St.

PATERSON, N. J.—Bids are asked until March 3, 8 p. m., for constructing pipe sewers in four streets. Thos. McLean, Cy. St. Comr.

BELLEVUE, PA.—It is probable that an election will be held early in April to vote on the question of issuing $60,000 in bonds for a system. Capt. Wm. Martin, Chn. Com.

SCRANTON, PA.—The mayor has signed the resolution for the construction of the South Side sewer. Jos. P. Phillips, Cy. Engr., writes us that nothing definite in regard to sewers and paving has been decided upon.

WAYNESBURG, PA.—E. J. Millar, 19 Masonic Temple, Wheeling, W. Va., has been engaged to prepare plans for a system. Last week we stated that Mr. Millar had been engaged to design a system for Wheeling, W. Va. We are informed that it was a mistake and should be Waynesburg.

BALTIMORE, MD.—It is proposed to construct a sewer in Bunce Alley, at a cost of $48,000.

OCEAN CITY, MD.—This place is reported to have applied for authority to issue $25,000 in bonds for a system and water-works.

MARION, VA.—It is reported that this place is considering the question of constructing a system. A. T. Lincoln, Recdr.

NEWPORT NEWS, VA.—Bids are asked until March 8 for the purchase of $140,000 of 4½% sewer, school and jail bonds. J. A. Massie, Cy. Clk.

AMERICUS, GA.—The city clerk and treasurer writes us that the supreme court has dismissed the injunction case against the city issuing $35,000 in bonds for a system and water-works. The city has won. J. B. Ansley, Cy. Engr.

DALTON, GA.—B. C. Briings, Cy. Clk., writes us that the council contemplates calling an election either in March or April to vote on the question of issuing bonds for a system and a light plant.

AKRON, O.—Bids are asked until March 12 for constructing pipe sewers in five streets. F. C. Wilson, Cy. Clk.

CLEVELAND, O.—Bids are asked until March 18 for constructing a storm outlet sewer, as stated in our advertising columns. Geo. R. Warden, Dir. Pub. Wks.

GLENVILLE, O.—Bids are asked until March 30 for constructing sewers in section 1 of district No 2. Z. W. Morris, Village Clk.

TOLEDO, O.—Michael Kelly has been awarded the contract for constructing a main sewer in the Ironville district at $13,722. Mr. Kelly has also been awarded the contract for a sewer in Baxter St. at $2,350.

YOUNGSTOWN, O.—Bids are asked by the board of city commissioners for constructing sewers in four streets.

ALTON, ILL.—E. E. Rutledge, Cy. Engr., writes us that this city will do considerable sewer work and paving this spring and summer.——Bids are being asked by the council for constructing $1,550 ft. of 15-in. pipe sewer in Bluff St.; average cut, 8 ft.

CHICAGO, ILL.—Bids are asked until March 4 for constructing sewers in a large number of streets. Bids are asked until March 7 for constructing intercepting sewers, as stated in our advertising columns. L. E. McGann, Comr. Pub. Wks.

KEWANEE, ILL.—We are informed that plans for the proposed system, to be 12 miles long, were prepared last year by Jno. C. Quade, Secy. Bd. Local Improvements. H. C. Huntington and J. J. Fleming are on the committee. I. P. Guest, Cy. Clk.

NEW ULM, MINN.—Bids were received by the council until March 1 for constructing a system, according to reports.

WHEATON, MINN.—M. B. Haynes, Mankato, Minn., is reported as preparing plans for a system and waterworks.

GARBAGE DISPOSAL—STREET CLEANING

NEW HAVEN, CONN.—Frank W. Wright, Health Officer, informs us that the board of health has for several years tried to get an appropriation for the purchase of a plant. It is not likely that the appropriation will be secured very soon. Local papers state that Mr. Wright estimates the cost of a plant at $12,000.

BUFFALO, N. Y.—Bids are asked until March 10 for the destruction of the garbage, kitchen refuse, etc., of this city for one or five years. R. G. Parsons, Secy. Dept. Pub. Wks.

ROCHESTER, N. Y.—Local papers state that the executive board is considering the advisability of purchasing new street sweeping machines.

TROY, N. Y.—Ogden Ross, Secy. Contracting Bd., writes us that the city has been divided into 19 carting districts and 23 sweeping districts. Bids were submitted Feb. 25 by about 850 men to sweep on the streets, each to receive $28 a month. They are bunched together in 13 gangs, having a section boss (who looks after 6 to 7 gangs each) and the street superintendent over all. The carters receive from $90 to $130 a month per district depending upon the territorial size and number and character of buildings in his district. Troy has, in addition to all this, a crematorium on one of the adjacent islands in the Hudson River, and pays annually $5,800 for the disposal of the ashes and garbage, but does not own the plant. There have been appointed 220 sweepers to sweep the streets and 19 carters have undertaken to remove all the ashes, garbage and refuse to the crematorium. The plan has been in vogue over five years and seems to give satisfaction.

EASTON, PA.—Edward Hart, of the committee, informs us that the city has determined to create a department of street cleaning. It will probably contract for the removal of garbage from the city this year.

ALEXANDRIA, VA.—The Sicardi Street Cleaning Co. has been incorporated with a capital stock of $100,000. Charles Bendheim, Alexandria, and Giovanni Sicardi may be addressed.

TOLEDO, O.—Bids for the construction of a crematory and the collection of garbage of this city for five years were received from the following Feb. 22: Dixon Sanitary Crematory Co., Findlay, O., $34,950; Col. Isaac D. Smead, $65,000; D. J. O'Hara, Toledo, collect and cremate the garbage for five years, $65,000; Pennsylvania Construction Co., Marietta, Pa., $20,000; Julius E. Otto, $725 to $1,000 a month; S. P. Nowak, $360 and $900 a month; H. J. Bower, $13,800 a year; Chas. Neundorff, $11,000 and $14,000 a year.

DETROIT, MICH.—The health committee has recommended that bids be asked by the controller at once for collecting the garbage, etc., for a term of three years from July 1.

STREETS AND ROADS.

GOFFSTOWN, N. H.—Reports state that a proposition has been presented to the council for purchasing a road machine.

DENNIS, MASS.—Bids are asked until March 3 for constructing about 8,900 ft. of state highway. T. C. Mendenhall, Pres. Massachusetts Highway Comn., Boston.

WILLIMANTIC, CONN.—Oscar O. Tanner, Mayor, informs us that this place has appropriated $5,000 to pave Main St., which will probably be with asphalt on brick foundation.

ALBANY, N. Y.—Bids are asked until March 7 for brick paving, sidewalks, etc., in Hunter Ave., from Watervliet Ave. to Colby St., and Colby St. from Central Ave. to 2d St. Thos. J. Lanahan, Clk. Bd. Contract and Apportionment. The board of contract has appropriated about $27,300 for paving in portions of five streets.

BUFFALO, N. Y.—Bids are asked until March 9 for constructing sidewalks, grading, etc., during 1898. R. G. Parsons, Secy. Bd. Pub. Wks.

WEBB MILLS, N. Y.—We are informed that an election will be held in March to vote on a proposition to purchase a plank road. M. T. Cassada, Chn. Com.

BRIGHTON, N. Y.—The trustees are acting on a petition for paving in East Ave. from the Culver Road to the Auburn Branch of the New York Central R. R., a distance of one mile. W. W. Mumford, Chn.; Wm. Shelmire, Clk.

SCHENECTADY, N. Y.—Bids are asked by the council until March 8 for grading, curbing and paving in Albany St. from Hulett St. to Brandywine Ave. and grading Brandywine Ave. from State St. to Union St. L. B. Sebring, Cy. Engr.

ONONDAGA, N. Y.—A bill has been introduced in the senate for the appropriation of $2,000 to construct a road from Indian Quarry to join the Lafayette Road, a distance of about 1¼ miles.

YONKERS, N. Y.—Senator Burns has presented a bill in the legislature authorizing the issue of $25,000 for the improvement of North Broadway.

ATLANTIC CITY, N. J.—Bids are asked until March 12 for constructing a board walk, as stated in our advertising columns. J. P. Ashmead, Cy. Surv.; E. S. Lee, Chn. Com.

ATLANTIC CITY, N. J.—Bids are asked by the council until March 14 for paving Michigan Ave., from Atlantic Ave. to the beach. W. A. Ireland, Chn. Com.

WOODBURY, N. J.—It is proposed to construct a gravel road 20 ft. wide, 10 ins. thick and about 6 miles long, costing $1,000 per mile, from Clayton to Franklyn township.

SCRANTON, PA.—Reports state that a petition is to be presented to the council for paving Sanderson Ave. with brick between East Market and Marion Sts.

WYTHEVILLE, VA.—A bill is to be introduced in the legislature authorizing the citizens to vote on the question of bonding the county for $100,000 for macadamizing.

MOUNDSVILLE, W. VA.—It is reported that a proposition to issue $100,000 in bonds for road improvements will be voted upon at the election March 5.

WHEELING, W. VA.—Bids are asked by the council until March 30 for paving.

ORLANDO, FLA.—Local papers state that S. A. Robinson, County Surv., has completed plans for the proposed clay road from Orlando to Sanford.

ST. AUGUSTINE, FLA.—Reports state that McGuire & McDonald have offered a proposition to pave Cathedral Place with brick from St. George St. to Charlotte St.

HIGH SPRINGS, FLA.—W. N. Gramling, Clk. and Treas., informs us that an election will be held to vote on the question of grading and paving with rock, 25,000 sq. yds. in portions of North First Ave., West Ninth St. and West Tenth St. No plans have been adopted. Estimated cost, $6,000. H. Hengefeld, Chn. Council.

AKRON, O.—Bids are asked until March 12 for grading, curbing and brick paving in Oakdale Ave. from Market St. to Crosby St. Frank C. Wilson, Cy. Clk.; S. W. Parshall, Cy. Engr.——A resolution has been passed by the council authorizing asphalt, brick or stone paving in Market St. from High St. to Buchtel Ave.

OTTAWA, O.—Bids are asked until March 17 for paving about 23,279 sq. yds. with brick or blocks in Main-Cross St., according to reports. L. H. Huber, Cy. Clk.

NORWOOD, O.—Bids are asked until March 12 for grading, macadamizing, etc., in Wesley St. from Harris to Highland Ave. James A. Stewart, Cy. Engr.; W. E. Wichgar, Clk.

CLEVELAND, O.—Reports state that Eli W. Cannell has submitted the lowest bid at $10,931 for grading Warner Road.

ALLIANCE, O.—The council has adopted resolutions to have East Main St. paved with either asphalt or brick. O. W. Pfouts, Cy. Engr.

WAPAKONETA, O.—Bids are asked until March 21 for the purchase of $35,000 of 5% street bonds.

NORWOOD, O.—Reports state that Louis Drach has been awarded a contract at $70,900 for improving the Montgomery Pike from Swanhoe Ave. to Mound Ave.

CLEVELAND, O.—Press reports state that about $500,000 will be expended for paving this year.

SPRINGFIELD, O.—Bids are asked until March 5 for curbing, guttering and constructing brick, stone and cement sidewalks. Samuel J. Wilkerson, Cy. Clk.

EVANSVILLE, IND.—The board of public works has authorized paving in portions of Grant and Oakley Sts. with asphalt and five streets and six alleys with brick. A hearing will be given March 19 on the question of asphalt paving in Line St. from Washington Ave. to Lincoln Ave. and brick paving in Division St. from Heidelbach Ave. to Ballard Ave.

DETROIT, MICH.—The board of public works is considering estimates amounting to about $1,088,000 for paving and street work for the year.——The board of public works has asked for an appropriation of $227,435 for the proposed asphalt paving in 15 streets.

BLOOMINGTON, ILL.—C. L. Hills, Secy. Bd. Local Improvements, informs us that the following bids were received Feb. 17 for stone curbing in Chestnut St.:

Walsh & McDonald, Bloomington Ill.	$2,359
John Cherry, Jr., Jacksonville, Ill. (accepted)	2,330

QUINCY, ILL.—The board of local improvements will give a hearing March 7 on the proposed brick paving in five streets; estimated cost, about $70,000.

KEWANEE, ILL.—J. C. Quade, Cy. Engr., informs us that 3¼ miles of brick paving on concrete foundation will be constructed this year; estimated cost, $40,000.

ALTON, ILL.—E. E. Rutledge, Cy. Engr., informs us that considerable paving will be done here this spring.

ST. PAUL, MINN.—Bids are to be asked by the board of public works for the following: About 50,000 sq. ft. of cement blocks, 1,000 ft. of cement surfaced walk, 200 lin. ft. of curb, 100 cu. yds. of cement and dry masonry, 10,000 brick, 100 cu. yds. of earth and 10 cu. yds. of rock excavation, 1,000 lbs. of railroad and wrought iron, 10 cu. yds. of concrete, 200 sq. yds. of brick paving, 1,000 sq. ft. of cement walk, and 5,000 ft., B. M., of lumber.

OMAHA, NEB.—Bids are asked until March 11 for constructing sidewalks of stone, brick or tiling for the year 1898. Andrew Rosewater, Chn. Bd. Pub. Wks.

BEAUMONT, TEX.—P. A. Hersey, Cy. Secy., informs us that this place will issue $10,000 in bonds for paving, etc. C. B. Daniels, Des. Engr.

COLORADO SPRINGS, COLO.—M. M. Sinton, County Comr., informs us that about $14,000 has been appropriated for maintaining county roads for 1898. Work will not be done by contract.

NEW WHATCOM, WASH.—Reports state that M. T. Gee, Custer, has been awarded a contract at $13,700 to construct the Blaine and Ferndale Road.

MANUFACTURING PLANTS.

LOWELL, MASS.—Merrill & Clark, Architects, Central St., Lowell, inform us that the contract for building a 3-story factory building for the H. R. Barker Mfg. Co., to replace the one destroyed by fire, has been awarded to C. H. Nelson, of Lowell, Mass. The old engines and boilers and most of the machinery were saved.

ANSONIA, CONN.—The Berlin Iron Bridge Co., of East Berlin, Conn., are constructing a new boiler house roof for the factory of the Coe Brass Mfg. Co. at this place.

WATERVLIET, N. Y.—It is reported that William Barker, of Troy, has bought property on Broadway, near 16th St., and that he will shortly erect thereon a large collar manufactory.

PHILADELPHIA, PA.—We are officially informed that Roydhouse, Arey & Co., 24 South 7th St., Philadelphia, will erect a 3-story machine shop, 100 × 150 ft., for Burnham, Williams & Co., manufacturers of locomotives.

ALLEGHENY, PA.—Chas. H. Slocum, Secy. and Treas. Pennsylvania Car Wheel Co., Pittsburg, Pa., informs us that this company is now erecting a foundry in this city for the manufacture of high grade chilled car wheels. The contract for the building has been awarded to W. B. Scaife & Sons, Pittsburg. The main building will be built of steel and iron construction, 70 × 266 ft. The contracts for the entire equipment have also been let, and work is in rapid progress. It is expected to be in readiness for operation in about twenty days. Pres., Joshua A. Rhodes.

LYNCHBURG, VA.—The Stamford Dye Works, owned by the Stamford Mfg. Co., Stamford, Conn., were destroyed by fire, Feb. 27, causing a reported loss of $100,000; partly insured.

WINCHESTER, VA.—Bids are now asked, according to reports, for the necessary equipment for the mills of Kern, Walter & Barr and of C. A. Williams & Bros., which, it is said, will be rebuilt at once. Pickers, looms, beamers, cards, etc., will be required.

LOUISVILLE, KY.—J. M. Robinson, Norton & Co., of Louisville, inform us that they have awarded the contracts for building their new 2-story factory to be erected in this city for the manufacture of clothing.——A fire in this city, Feb. 25, destroyed the packing, drying and steaming warehouse of the National Tobacco Co., a branch of the American Tobacco Co., at 24th and Main Sts., causing a reported loss of $350,000, fully insured. W. B. Duke, Pres. American Tobacco Co., is quoted as saying that the three buildings will be rebuilt at once.

CINCINNATI, O.—The Bullock Electric Mfg. Co., manufacturers of electric motors, generators, etc., Cincinnati, informs us that bids are desired for new boilers for the plant in process of construction. Bids have already been received for engines, and the contract awarded for the steel structural work. Light and power will be supplied by the company's own generators. Engr., Bert L. Baldwin, Perin Bldg., Cincinnati.

TOLEDO, O.—The Toledo Beet Sugar Co., 830 Spitzer Bldg., informs us that the contract has not yet been let for its new sugar factory, but that Chicago parties will probably build when plans have been definitely decided upon.

QUINCY, ILL.—The Wellman & Dwire Tobacco Co., of Quincy, informs us that the construction of its new buildings is now well under way; estimated cost, $75,000. It is still undecided when bids for equipment, to cost about $25,000, will be asked. Engines, boilers and electrical fittings are already provided for. Arch., Isaac S. Taylor, 318 North 8th St.; Contractor for Buildings, Chas. B. McCormack, both of St. Louis, Mo.

WASKOM, TEX.—C. M. Abney, of Waskom, informs us that a new wooden and iron building, 18 × 40 ft., will be built by day labor for the Munzer Gin Co. Two 70-saw gins will be installed; boilers and engines have been bought. Arch., Mr. Munzer, Dallas, Tex.

GAS PLANTS.

BUFFALO, N. Y.—B. J. Morningstar & Co., Buffalo, have applied for franchises in Niagara Falls, Lockport and other neighboring towns to lay pipes for supplying natural gas.

PITTSBURG, PA.—Reports state that the Allegheny County Light Co. is having plans prepared for the extension of its works by establishing sub-stations with gas engines and generators in various parts of the county. A meeting will be held March 8 by the stockholders to vote on the question of increasing the capital stock.

CHARLOTTE, N. C.—Bids are asked by the Charlotte Electric Ry., Light & Power Co. to construct a gas holder of 100,000 ft. capacity, according to reports.

BIRMINGHAM, ALA.—A. T. Loudon and Sol. Haas have been awarded a contract to construct and operate a gas plant in this city. F. V. Evans, Mayor; A. J. Camp, Clk.

NEW COMPANIES.—Fulton National Gas Co., Johnstown, N. Y., $10,000; H. W. Hains, East Orange, N. J.; Woolsey Cormalt, J. D. Laying, New York, N. Y.

Brooklyn Borough Gas Co., Brooklyn, N. Y.; $500,000; John B. Summerfield, Henry M. Haviland, Brooklyn; Samuel B. Lawrence, F. P. Lowery, A. Mathews, Manhattan.

Citizens' Gas Co., Pottstown, Pa.; $1,000. Edward T. Taylor, Yeadon; Frederick A. Kruger, J. H. Smith, Frank Black, Philadelphia; Talbot L. Hibbard, Lansdowne.

Pittsburg Fuel Gas Co., Pittsburg, Pa.; $1,000; W. P. Potter, Joseph Keeling, W. A. Dinkel, Patrick Ridge and F. L. Slocum, Pittsburg.

Ross Oil Co., Waverly, W. Va.; $100,000; with $14,000 paid in; to bore for oil and gas; R. H. Ross, W. J. Rodgers, A. R. Rolston, C. P. Ross, M. S. Gono, Waverly.

Orient Oil, Gas & Development Co., Parkersburg, W. Va., $100,000, with $600 paid in; F. C. Percival, J. W. Johnson, J. A. Watson, C. L. Slayton, E. R. Patton, Parkersburg.

MISCELLANEOUS CONTRACTS.

DREDGING.—San Francisco, Cal.—A proposition has been presented to the board of supervisors for dredging the canal under the Fourth St. bridge.

FIRE BOAT.—Detroit, Mich.—The construction of a new fire boat has been ordered by the fire commissioners. It will have a triple expansion pump.

FIRE ENGINE.—Pittsburg, Pa.—Bids are asked until March 5 for furnishing a fifth-size fire engine. J. O. Brown, Dir. Dept. Pub. Safety.

SMOKESTACKS.—Zanesville, O.—Reports state that the gas company is planning to construct a new smokestack 100 ft. high and a warehouse for coal and supplies.

SNOW ROLLERS.—Wilmot, N. H.—Reports state that the selectmen will ask the town to vote an appropriation to purchase two snow rollers.

TELEPHONE CONDUITS.—Williamsport, Pa.—The Pennsylvania Telephone & Supply Co. will expend about $25,000 in laying about 6,000 ft. of conduits this year.

DIPPER DREDGE.—Chattanooga, Tenn.—Bids are asked until April 2 for constructing a dipper dredge, as stated in our advertising columns. Maj. John C. Kingman, U. S. Engr., Chattanooga.

WHARF, ETC.—Fort Barrancas, Fla.—Bids are asked until March 28 for constructing a wharf and boat house, as stated in our advertising columns. Lt. M. F. Harmon, Q. M.

BOARD WALK.—Atlantic City, N. J.—Bids are asked until March 12 for constructing a board walk, as described in our advertising columns. J. P. Ashmead, Cy. Surv.; E. S. Lee, Chn. Com.

LEVEE WORK.—Crowley, La.—Bids are asked for constructing 250,000 cu. yds. of earth levees for the Abbott-Duson and Ferre Roller canals. W. W. Duson & Bro., or Abbott Bros., Crowley, may be addressed.

REPAIRING PIER.—Charlevoix, Mich.—Bids are asked until March 30 for repairing the pier at this place, as stated in our advertising columns. Capt. C. McD. Townsend, U. S. Engr., 57 Park St., Grand Rapids, Mich.

LIGHT-HOUSE FOUNDATION.—Dunkirk Harbor, N. Y.—Bids are asked until March 15 for reconstructing the foundation of the pier-head beacon. Maj. W. S. Stanton, U. S. Engr., 10th Lighthouse district, Oswego, N. Y.

TIMBER.—Minneapolis, Minn.—Bids are asked by the U. S. Engineer, Minneapolis, until March 7, for furnishing the timber to be used in constructing the cofferdam at the Meeker Island dam No. 2, which will cost $600,000.

COALING STATION.—Jersey City, N. J.—Bids are asked until March 12 for constructing a coaling station at Jersey City for the Erie R. R. Co., as stated in our advertising columns. Address Chief Engineer, 21 Cortlandt St., New York.

AIR COMPRESSOR.—Birmingham, Ala.—Reports state that the Warrior Machine Works, Birmingham, wishes to purchase two crank and fly-wheel second-hand air compressors having a 20 × 20 × 30-in. and 24 × 24 × 36-in. stroke, respectively.

WHARF.—Tampico, Mex.—It is stated that contracts will soon be let for constructing a new wharf at Tampico, to replace the one destroyed by fire Feb. 20, which was 2,575 ft. long, as noted in our issue of last week. L. Kingman, Engr., Mexico, Mex.

TELEPHONE SYSTEM.—Grand Rapids, Mich.—S. G. Higgins, Pres. Saginaw Valley Telephone Co., proposes to connect the system with the Grand Rapids Independent Telephone System by way of Howard City, Edmore and Alma. Work to be begun in the spring, according to reports.

CONTRACT PRICES.

SEWER PIPE.—Atlanta, Ga.—The committee has awarded the following contract to Sciple Bros., Atlanta, for furnishing sewer pipe:

	Pipe, a ft.	Y's. 2-in., a ft.	Y's. 2½-in., a ft.		Pipe, a ft.	Y's. 2-in., a ft.	Y's. 2½-in., a ft.
8-in.	$0.09	$0.405	$0.49	18-in.	$0.34	$1.535	$1.695
10-in.	.13	.585	.65	20-in.	.45	2.025	2.25
12-in.	.17	.765	.85	22-in.	.55	2.475	2.75
15-in.	.25	1.125	1.25	24-in.	.65	2.925	3.25

LAYING WATER PIPE.—Westfield, Mass.—We are informed that the following bids were received Feb. 23 for laying cast-iron water pipe for the Granville supply, as advertised in Engineering News; O. E. Parks, Engr.:

SIDEWALKS.—Des Moines, Ia.—J. B. Lucas, Clk. Dept. Pub. Wks., informs us that the following bids were received Feb. 18 for constructing sidewalks during the year: Hugh Miller, Des Moines, 6¼ cts., 12 cts.; M. V. Kennedy, Des Moines, 6½ cts., 11 cts.; and Capitol City Brick & Pipe Co., Des Moines, 7 cts., 14 cts. a sq. ft., respectively, for brick and cement walks.

ROAD ROLLER.—South Bend, Ind.—The committee, composed of Councilmen Skillman, Lister, Morgan, Fites and Doolittle, received the following bids Feb. 15 for furnishing a steam road roller: The O. S. Kelley Co., Springfield, O., $3,250 for a 12-ton roller; $3,500 for a 14-ton roller, with a discount of $250 if the steam steering device is not used. Russell & Co., Massillon, O., $2,850 for a 12-ton roller. The Enterprise Mfg. Co., Columbiana, O.,$3,310 for a 10-ton roller; $3,625 for a 12-ton roller. The Harrisburg Foundry & Machine Works, Harrisburg, Pa., double engine steam roller, 10-ton, $3,250; 12-ton, $3,500; 15-ton, $3,750.

CEMENT.—Atlanta, Ga.—The commissioner of public works received the following bids Feb. 7 for furnishing cement: V. H. Kriegshaber, Atlanta, Louisville cement, 51¼ cts. a 100 lbs.; Sciple Sons, Atlanta (accepted), Louisville cement, 50 cts. a 100 lbs., and 44 cts. a 100 lbs. for Howard cement.

GAS SUPPLY.—Pottstown, Pa.—The Pottstown Gas Co., it is reported, will supply this city with gas at $1.50 a 1,000 cu. ft. for the first 10 years, $1.25 a 1,000 cu. ft. for the next five years, and after that at $1.00 a 1,000 cu. ft.

ASPHALT COVERING.—Los Angeles, Cal.—The board of supervisors has awarded the contract for covering the El Monte Bridge with asphaltum to the Standard Asphalt Paving Co. at 6⅜ cts. a sq. ft., guaranteed for six years.

PAVING.—Minneapolis, Minn.—The following bids were received by the council Feb. 14 for paving 24th Ave., from 1st to 2d Sts.; Canny Bros., granite blocks, $1.50 a sq. yd.; sandstone blocks, $1.65; Minnesota Sandstone Paving Co., sandstone blocks, $1.64. E. R. Dutton, St. Engr.

CONNECTING WATER METERS.—Ottawa, Ill.—Clegg & Dougherty have been awarded the contract for connecting 575 water meters of from ⅜ to 1-in. in size at $2.10 for each meter.

MACADAM ROAD.—Woodbury, N. J.—H. J. Mullin, Ozone Park, L. I., N. Y., was awarded the contract Feb. 27, for constructing a macadam road from Paulsboro to Swedenboro, as advertised in Engineering News, at 64 cts. a sq. yd.; total, $30,100.

STORAGE BATTERIES.—Chicago, Ill.—Edward B. Ellicott, Cy. Electrician, informs us that the following bids were received, Feb. 26, for furnishing storage batteries: Portable cells, 300, Police Telephone & Signal Co., Chicago, $10.75 each; American Battery Co., Chicago, $10.50; stationary cells, 900, Police Telephone & Signal Co., $1.25 each; American Battery Co., Chicago, $1.50, and the Sipe & Sigler Co., Cleveland, O., $1.20.

METAL MARKETS.

LEAD.—New York, 3.80 cts. to 3.85 cts.

NAILS.—Pittsburg, $1.10 to $1.12½.

PIG IRON, NO. 1 FOUNDRY.—New York, $10 to $12; Chicago, $10.50 to $12.50; Pittsburg, $9.50 to $10.

TRACK MATERIAL.—New York, angle bars, 1.10 cts. to 1.15 cts.; spikes, 1.50 cts. to 1.55 cts.; track bolts, hexagonal, 1.75 cts. to 1.80 cts. Chicago, angle bars, 1.20 cts. to 1.30 cts.; spikes, 1.60 cts. to 1.65 cts.; track bolts, square, 1.80 cts. to 1.90 cts.; hexagonal, 1.90 cts. to 2 cts.

Bids Received Feb. 23 for Laying Cast-Iron Water Pipes, Etc., Westfield, Mass.

Quantities.		Smith Bros., Pelhamville, N. Y.	J. Marsden, Utica, N. Y.	Long & Little, Leominst'r, Mass.	T. M. Lesher & Son, Easton, Pa.	D. Cuozzo, N. Y.	J. Berkery, W. Hoboken, N. J.	S. W. Frescoln, Reading, Pa.	F. Pidgeon, Saugerties, N. Y.	Moore & Co., Boston, Mass.	Boren & Johnsn, Steubenvle, O.	J. F. Carey, W. Winsted, Conn.	Dan'l O'Connell & Sons, Holyoke, Mass.	L. A. Taylor, Worcester, Mass.	Coughlin & Ryan, Boston, Mass.	T. H. & G.M. Bryne, Hyde Park, Mass.	J. Cashman, Quincy, Mass.	Bruno & Salomone, E.Bstn, Mass.	H. A. Hancom & Co., W. Medf'd, Mass.
Laying 24-in. pipe	36 lin. ft.	$0.40	$0.50	$0.60	$0.56	$0.40	$0.48	$1.00	$1.50	$5.00	$0.70	$0.97	$0.75	$0.60	$0.73	$0.50	$1.00	$0.85	$1.00
" 20-in. "	8,100 " "	.34	.48	.36	.46	.40	.45	.46	.50	.60	.725	.80	.63¾	.45	.71	.50	.35	.70	.60
" 18-in. "	9,100 " "	.29	.45	.33	.42	.40	.40	.46	.50	.50	.725	.75	.61⅔	.51	.71	.50	.35	.70	.60
" 16-in. "	2,500 " "	.26	.40	.29	.38	.40	.38	.40	.50	.40	.625	.72	.59⅔	.39	.63	.50	.35	.65	.60
" 14-in. "	14,150 " "	.24	.38	.48	.36	.40	.35	.39	.40	.30	.75	.62	.54½	.38	.63	.50	.35	.60	1.59
" 12-in. "	60 " "	.20	.30	.30	.33	.40	.30	1.00	.40	.30	.375	.50	.54	.35	.50	.50	.35	.50	.50
" 6-in. "	170 " "	.14	.25	.30	.23	.40	.20	1.00	.40	.20	.625	.50	.53	.15	.50	.50	.35	.30	.50
Rock excavation	6,800 cu. yds.	1.60	1.00	2.00	2.00	2.45	2.50	2.45	2.50	3.00	2.00	2.10	2.60	3.55	2.40	3.25	4.50	3.25	2.00
Extra earth excav.	50 " "	.50	.50	.70	.40	.50	.50	1.00	.50	.50	.625	.50	2.00	.80	.60	1.00	1.00	.50	1.00
Dry rubble masonry	250 " "	1.75	1.25	2.25	2.00	1.50	2.50	2.25	2.50	3.00	2.50	2.50	4.00	2.25	2.00	3.50	4.00	3.25	3.00
Rubble masonry	110 " "	4.00	3.00	4.00	4.00	4.00	4.00	5.00	4.50	6.50	4.25	5.00	5.00	4.00	4.00	5.50	7.00	4.50	5.00
Concrete masonry	90 " "	6.00	4.00	4.00	5.50	5.00	4.00	5.00	5.00	7.00	3.75	5.50	6.00	4.00	5.25	5.50	8.00	5.50	5.00
24-in. vitrified pipe	30 lin. ft.	1.00	.25	.50	2.00	1.00	.50	1.00	4.00	1.50	.43	.50	.50	.25	.15	1.00	.25	.40	.50
Paving	100 sq. yds.	.20	.30	.70	.30	.60	1.50	2.00	1.50	1.50	.75	.50	.75	.50	1.10	1.25	1.50	2.50	2.00
Total		$21,862	$22,304	$28,609	$28,816	$31,686	$31,872	$33,199	$34,521	$37,602	$39,948	$40,068	$40,088	$40,306	$40,720	$41,338	$45,262	$46,456	$50,085

PIPE SEWERS.—Atlanta, Ga.—Our correspondent informs us that the following bids were received Feb. 7 for constructing pipe sewers, all local bidders:

Quantities.	Davis Smith, $30,875.	W. A. Hancock, $30,925.	M. F. Sullivan, $36,625.	W. W. Griffin, $42,190.	Palmer & Moody, $32,625.	Morrow & Co. (accepted), $28,199.
Brick masonry, a 1,000	$7.75	$8.45	$9.00	$9.25	$7.50	$8.00
Rubble mas'ry, cu. yd.	1.00	.85	1.50	2.00	1.10	.05
Cut stone, cu. ft.	1.00	.25	1.00	2.50	1.50	.02
Cut flagging, sq. ft.	.50	.25	.75	1.25	.75	.01
Lumber, a M. ft.	7.50	7.00	8.50	9.00	8.00	.25
Excavation:						
10 ft. deep, cu. yd.	.17	.20	.20	.189	.22	.22
15 " " "	.21	.23	.24	.25	.27	.25
20 " " "	.16	.15	.24	.30	.10	.16
25 " " "	.15	.04	.24	.40	.01	.01
Concrete, a cu. yd.	.50	.10	2.00	2.75	2.00	.03
Solid rock excavatn, cu. yd	.50	.50	.60	.60	.75	.25
Laying pipe, a lin. ft.:						
8, 10 and 12-in.	.06	.04	.03	.06	.05	.03
15 and 18-in.	.06	.05	.04	.08	.07	.09
20, 22 and 24-in.	.06	.07	.05	.10	.10	.12

PIPE SEWERS.—Erie, Pa.—B. E. Briggs, Cy. Engr., informs us that the following bids were received Feb. 24 for constructing 2,010 ft. of 18 and 12-in. pipe sewers in 18th st.; average cut, 16 ft., in gravel, clay and shale; with guarantee for the good condition of the street for one year; the bid of John Thornton was accepted:

SHORE PROTECTION.—Mobile, Ala.—We are informed that the U. S. Engineer received the following bids Feb. 15 for shore protection, etc.: B. O. Watkins, Birmingham, Ala., $4.50 a cu. yd. for stone in place in sea wall; 30 cts. a sq. ft. for fascines in place in sea wall. W. Chase Spotswood, Mobile, $3.20 and $1.25, respectively.

ARC LIGHTS.—Richmond, Va.—We are informed that the following bids were received by W. P. Knowles, Supt., Feb. 1, for furnishing 500 arc lights: Richmond Ry. & Electric Co., 18 cts. a light for all-night service every night in the year; Southern Electric Co., Richmond, 19⅗ cts. a light for the same service. Up to a late date no award had been made.

GRADING, ETC.—Riverside, Cal.—The following bids were received by the city trustees, Feb. 7, for grading in 7th St.; C. W. Finch, St. Supt.:

Items.	H. E. Branch.	J. H. Chambers.
Grading roadway, a sq. ft.	$0.00¾	$0.00¾
Sidewalk, a sq. ft.	.00¾	.00¾
Graveling roadway, a sq. ft.	.00¾	.00⅗
Sidewalk, a sq. ft.	.00¾	.00⅗
Curbing, lin. ft.	.28	.30
Steel pipe culvert	.98½	1.10
Vitrified pipe culvert	.40	.60

SEA WALL.—Tompkinsville, (S. I.), N. Y.—The Geo. B. Inman Contract Co., 27 Thames St., New York, has been awarded the contract for constructing a sea wall at the general light station at $126 a lin. ft.

WATER METERS.—Petersburg, Va.—N. T. Patteson, Jr., Chn. Com., informs us that the council has bought 750 ⅝-in. water meters from the Neptune Meter Co., 253 Broadway, New York, for $8.40 each, including connections, and 250 from the Hersey Mfg. Co., South Boston, Mass. Meters larger than ⅝-in. were at prices in proportion to size. The council appropriated $15,000 for the purchase of meters. T. R. Dunn, Cy. Engr.

RAILS.—New York, $18. Chicago, $20 to $22.50; old rails, iron, $12 to $12.50; steel, $10.50 to $11. Pittsburg, $17.50 to $18; old rails, iron, $14; steel, $10.50.

STRUCTURAL STEEL.—New York, beams, 1.30 cts. to 1.35 cts.; channels, 1.30 cts. to 1.35 cts.; angles, 1.15 cts. to 1.20 cts.; plates, 1.12½ cts. to 1.20 cts.; universal mill plates, 1.15 cts. to 1.20 cts.; tank, 1.20 cts. to 1.30 cts.; shell, 1.35 cts. to 1.40 cts.; flange, 1.60 cts. to 1.75 cts.; fire box, 2.25 cts. to 2.50 cts. Chicago, beams, 1.30 cts. to 1.45 cts.; angles, 1.15 cts. to 1.25 cts.; tees, 1.35 cts. to 1.40 cts.; plates, 1.10 cts. to 1.15 cts.; flange, 1.40 cts. to 1.45 cts.; fire box, 1.85 cts. to 5 cts. Pittsburg, beams, 1.15 cts. to 1.25 cts.; angles, 1.25 cts.; tees, 1.15 cts. to 1.20 cts.; universal mill plates, 1 ct.; shell, 1.10 cts.; flange, 1.20 cts.

MERCHANT STEEL.—Machinery, New York, 1.90 cts. to 2 cts.; best cast steel, 7 cts.

BAR IRON.—Common, 1.40 cts. to 1.50 cts.; refined, 1.50 cts. to 1.80 cts.

Bids Received at Erie, Pa., Feb. 24, for Constructing Pipe Sewers.

Quantities.		D. McCormick & Son.	B. J. Murphy.	Edw. Driscoll.	David Jones.	J. McCormick & Son.	John Thornton.
Pipe: 18-in. straight	1,300 lin. ft.	$1.92	$2.50	$2.19	$2.00	$1.75	$1.75
18-in. curve	630 " "	1.10	2.25	2.11	1.60	1.75	1.40
9-in., for spills, etc.	30 " "	.35	.40	.40	.40	.40	.37
6-in., for house connections	800 " "	.25	.40	.35	.30	.25	.37
18-in. branch	50 " "	2.15	2.75	2.55	2.35	1.90	1.75
12-in. branch	30 " "	1.40	2.70	2.31	1.75	1.90	1.40
Manholes	6 each	45.00	38.00	38.00	45.00	38.00	37.00
Catchbasins	2 "	35.00	35.00	30.00	45.00	32.00	29.00
Total		$3,984	.....	.....	.....	$4,034	$3,874

SEWER CASTINGS.—Atlanta, Ga.—The following bids were received Feb. 7 for furnishing sewer castings; the contract was awarded Glover Machine Works:

Items.	Glover Machine Works, Marietta, Ga.	W. S. Withers, Agent, Atlanta, Ga.
Castings, a 100 lbs.	$1.20	$1.26
Bars, a lb.	.015	....
Valves, each, 8-in.	3.25	4.75
Valves, each, 10-in.	3.50	4.75
Valves, each, 12-in.	3.75	4.75

CURBING, GRANITE BLOCK PAVING, ETC.—Atlanta, Ga.—The commissioner of public works received the following bids Feb. 21, for curbing, granite block paving in Marietta St., etc.:

Bidder.	Curbing, lin. ft.	Belgian block pav'g, a sq. yd.
W. J. Bishop & Son.	$0.329	$0.995
Walsh & McAlpin	.27⅞	...
R. H. Clarke	.48	1.135
S. C. Doby	.33⅛	...
Leftwich, Wright & Co.	.29	...
R. O. Phillips	.31¾	...
Francis Jones	.33½	...
W. H. Patterson	...	1.05
John Bradley	...	1.17

STREET SWEEPING.—St. Louis, Mo.—Our correspondent informs us that the board of public improvements received the following bids Feb. 25 for sweeping the streets by machine for a period of three years, from March 1, the contract usually amounts to about $70,000 a year:

	Per each 10,000 sq. ft. Brick.	Asphalt.	Granite.	Wood.
*Metropolitan Imp. Co	$0.26	$0.26	$0.25	$0.25
Wade Bros Con. Co	.35	.35	.395	.395
Miller Coal & Heavy Hauling Co.	.36	.36	.40	.40
Hill & Wright	.45	.45	.45	.60

*Awarded contract.

PIPE SEWER.—Erie, Pa.—John Thornton has been awarded the contract as follows, for furnishing the materials and for constructing a 15-in. pipe sewer in 23d St., from Liberty to Plum Sts.: 69 cts. a ft. for straight pipe and 75 cts. for branch pipe; 9-in. pipe, 30 cts.; 6-in. pipe, 23 cts.; each manhole, $31, and each catchbasin, $23. There were four other bidders their prices for 15-in. straight pipe being: John McCormick & Son, 98 cts.; Edward Driscoll, 90 cts; David Jones, 97 cts.; and B. J. Murphy, $1.30.

INDUSTRIAL NOTES.

THE E. P. ALLIS CO., Milwaukee, Wis., has the contract for the blowing engines to be placed in the new furnace of the Oliver & Snyder Co., Allegheny, Pa.

THE DETROIT DRY DOCK CO., Detroit, Mich., has the contract to build a steel, side-wheel passenger and freight steamer to run between Buffalo, N. Y., and Erie, Pa., for Capt. Geo. Brown, Sandusky, O., and others. It will cost about $140,000, according to reports.

LEONARD, FOLEY & CO., engineers and contractors, formerly of Philadelphia, are reorganizing their firm, and have located their main office at 668 Bowling Green Offices, 11 Broadway, New York. The company has several large contracts in the latter city.

THE DELAWARE RIVER & IRON SHIPBUILDING CO., Chester, Pa., has the contract to build a double-deck ferry boat for the Pennsylvania R. R. Co. for use between Jersey City, N. J., and West 23d St., New York. Reports state that it will be 206 ft. long and will cost $200,000.

THE DAVIS & EGAN MACHINE TOOL CO., Cincinnati, O., has ordered from the Pond Machine Tool Co., Plainfield, N. J., one of its latest pattern 72-in. square planers, with four heads, and 40-ft. table. This will be one of the longest planers running in this country, and will be installed in their new plant at Covington, Ky.

THE C. F. HUNT CO., Indianapolis, Ind., bridge contractor and dealer in sewer pipe and road machinery, is reported to have made a voluntary assignment to Mr. Murat W. Hopkins, of that city, for the benefit of creditors. The liabilities are said to be $35,000 and assets $50,000. Mr. C. F. Hunt is the General Manager.

THE PAGE WOVEN WIRE FENCE CO., Adrian, Mich., is about erecting another large building in which to place machinery, and also another office building. The annual output of its woven wire fence is said to be greater than ever before. The product of this company is now in use on nearly every American railway.

THE L. SCHREIBER & SONS CO., Cincinnati, O., has the contract for furnishing all the steel ornamental work and stair work for the Edison Electric Lighting Station, Charles and Plum Sts., Cincinnati. The building is 251 x 177 ft., and about 1,300 tons of steel will be required, besides a steel smokestack 20 × 200 ft. The contract price is about $60,000.

THE VIRGINIA BRIDGE & IRON CO., Roanoke, Va., calls our attention to the confusion on the part of many between the West Virginia Bridge Works, whose assignment was noticed in these columns last week, and this company. We are informed that the Virginia Bridge & Iron Co. is financially a strong company, and is enjoying prosperity.

THE SCHOEN PRESSED STEEL CO., Allegheny, Pa., is reported to have orders for 1,190 steel cars to be delivered by June 1, 1898, of which 400 are for the Pittsburg, Bessemer & Lake Erie R. R., 100 for the Pittsburg & Lake Erie R. R., 450 for the Pittsburg & Western Ry., 200 for the Pennsylvania R. R., and 40 for the Lake Superior & Ishpeming Ry.

HENRY R. WORTHINGTON, New York, has the contract, through the Chicago office, for an 8,000,000-gallon vertical triple expansion pumping engine for the city of Springfield, Ill. Other recent sales are two 1,000,000-gallon pumps to Gas City, Ill., a 750,000-gallon pump to the Seckner Contracting Co., Chicago, and a 500,000-gallon pump to the town of Argos, Ind.

THE NEW ENGLAND STRUCTURAL CO., 164 Devonshire St., Boston, and East Everett, Mass., entertained at the latter place, Feb. 16, the Boston Society of Civil Engineers, which came by a special train from that city. Three hours were given to inspecting the enlarged and improved plant of the company. This company has contracts for a large amount of structural and ornamental iron work around Boston.

THE MARION STEAM SHOVEL CO., Marion, O., writes us that its business prospects are excellent, and that its business for January was nearly a third greater than for any other month in the history of the company. During that month it sold 17 excavating machines, in addition to ballast unloaders and smaller machinery. Several of its large steam shovels are now working on heavy excavation on the Pennsylvania R. R.

THE JONES FENCE CO., Columbus, O., reports that the demand for its fences, and especially for its gate, among the railways is rapidly increasing. The fence is now in use on over 30 railways, among them being the Pennsylvania R. R. The Great Northwestern Ry. now has over 1,100 miles of the fence in use, the Norfolk & Western R. R. over 1,000 miles and the Boston & Albany R. R. over 300 miles.

THE AHRENS & OTT MFG. CO., 325 W. Main St., Louisville, Ky., manufacturers of plumbers' enameled ironware, etc., announces that Mr. W. H. Coopman, for some years past advertising manager for the company, whose resignation took effect March 1, 1898, has been succeeded by Mr. W. B. Gray. formerly Associate Editor of "The Sanitary Plumber" and of "Heating, Plumbing, Lighting," of New York.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., has a contract from the Cincinnati St. Ry. Co., Cincinnati, O., amounting, it is said, to over $100,000, for the necessary electrical apparatus to enable the latter company to change that portion of its Walnut Hills line, now driven by cable, to electric power.——The company has also a contract from the Boston Elevated Ry. Co. for electrical apparatus, amounting to about $100,000.

THE INDIANAPOLIS STREET CLEANING CO., Indianapolis, Ind., has supplied the Furnas pneumatic street sweeper, described in our issue of May 14, 1896, to Mr. W. S. Doan, Manager of the Bramley Street Cleaning Co., 5 Belmont St., Cleveland, O., who will use it on the smooth streets in that city. We are informed that this street sweeper is now in use in several other cities. Mr. R. W. Furnas, 112 and 114 North Pennsylvania St., Indianapolis, is the patentee.

THE NEW ERA IRON WORKS, Dayton, O., has recently furnished a 100-HP. gasoline engine to the McLean & Weston Brick Co., for use in its brick yards at Allegheny, Pa. This is said to be the largest single cylinder gas engine ever built in this country. Mr. Sullivan, Secy. and Treas., advises our representative that the company has booked orders for over 500 HP. in gas engines within 30 days, and that calls are coming in rapidly from all parts of the country and from all lines of trade.

THE NATIONAL ICE MACHINE CO., 253 Broadway, New York, is reported to have gone into the hands of a receiver, Feb. 18, with liabilities of $26,540, and only $2,217 in assets. On Dec. 24, 1897, the works of the United States Acetylene Supply Distributing Co., which is a side enterprise of the ice machine company, located in Jersey City, N. J., blew up, causing a loss, said to be $4,681; insurance, $1,650. This, together with poor business conditions in its field, has caused the directors to go into voluntary dissolution. Mr. Chas. J. Hardy has been appointed Receiver.

McLEOD & CLARK, 459 East Front St., Cincinnati, O., reports that the introduction of their Buckeye lamp among contractors is progressing rapidly, and that a number of sales have been made to foundries. These lamps are being made in three sizes, the prices of which are $75, $100 and $120, respectively. They are also placing on the market a portable lamp enclosed in an asbestos-lined sheet-iron box, mounted upon wheels, in which the Buckeye burner can be placed, and sufficient heat generated to remove frost in the earth. They can also be used in laying and repaving asphalt pavements.

THE SPRINGFIELD GAS ENGINE CO., 27 W. Washington St., Springfield, O., is making a specialty of furnishing plans and estimates to engineers, contractors and corporations for its gas engines, in all sizes up to 50-HP., for water-works and general water supply purposes. It has recently completed the installation of an engine at Lewisburg, W. Va., which is furnishing power for pumping water from Green Briar River to two 30,000-gallon tanks, a distance of 2½ miles, in which there is a lift of 641 ft. It has also furnished an engine to connect with an irrigating plant at Laredo, Tex.

THE HOPPES MFG. CO., Springfield, O., has recently been awarded some large contracts, among them being the following: Two live steam water purifiers of 1,250 HP., the Deering Harvester Machine Co., Chicago; three feed-water heaters and three live steam purifiers, of 3,750 HP., aggregating 4,500 HP., the N. Y. Sugar Refining Co., New York. Among receipt deliveries are: Three live steam purifiers, high pressure, the Union Traction Co., Philadelphia; 1,000-HP. live steam purifier, Louis Sands, Manistee, Mich., and a 1,000-HP. purifier, being the third order, Proctor & Gamble, Ivorydale, O.

THE STILWELL-BIERCE & SMITH-VAILE CO., Dayton, O., has the contract for a 75,000-HP. water-wheel plant, to be built at Massena, N. Y. This is said to be the largest water-wheel plant contract ever made. Mr. G. N. Bierce, Secy., advises our representative that, owing to the failure of the contractor, all work has been temporarily suspended. The company also has a contract for installing a 10,000-HP. water-wheel plant near St. Catherines, Ont., for the Cataract Power Co., Hamilton, Ont. At Chambly, Que., it has recently installed a 21,000-HP. water-wheel plant, from which power will be transmitted to Montreal, Que., for lighting, street railways and general power purposes. A 10,000-HP. plant is being built by the company at Mechanicsville, N. Y., from which power will be transmitted for general purposes to Schenectady, Troy, Albany and adjoining towns.

THE GILLETTE-HERZOG MFG CO., Minneapolis, Minn., has recently been awarded contracts as follows: Gold mill, Cochite Mining Co., Cochite, N. Mex., $50,000; Hennessey Building (fireproof), Denver, Colo., $50,000; sugar house, Calumet plantation, in Louisiana, $50,000; smelter, Germania Lead Co., Salt Lake City, Utah; power house and penstocks, Montana Power Co., Divide, Mont.; compressor building, Anaconda Copper Mining Co.; power house transformer building and 12-ft. penstocks, Helena (Mont.) Water & Electric Power Co.; addition to the United Verdi Copper Co., Jerome, Ariz. In the bridge department, among other contracts, is a swing span at Osceola, Ia., over the St. Croix River. Among other contracts recently or about completed by this company are: De La Mar gold reduction plant, Mercur, Utah; cost, $120,000; a complicated roof for the Iowa Hospital for the Insane, Cherokee, Ia., and a sugar house, cost, $40,000, for Leon Godchaux, St. Peters, La. During 1897 the company built over 120 highway bridges, besides the large amount of building and railway bridge work previously noted in this column. Mr. Frank J. Llewellyn is Vice-President and Chief Engineer.

THE GENERAL ELECTRIC CO., Schenectady, N. Y., has a contract from the Boston Electric Light Co., Boston, Mass., for the equipment of its generating station, now in course of erection. Up to the present the latter company has operated a number of stations; two of these, however, have recently been abandoned to make way for the new railway stations now being built and all the small stations will be consolidated into one large generating plant to be erected in South Boston. The system will involve the use of the three-phase alternating current, and there will be four dynamos, each of 1,500 K-W., with a reserve capacity of 50%, giving a total of 12,000 HP. The revolving field on each dynamo will be mounted on the shaft of an engine, and the current will be 2,200 volts. To excite these dynamos two smaller ones, of 100 HP. each, will each be driven by a synchronous motor and in addition 18 large synchronous motors, of 200 HP. each, will drive 36 arc-lighting dynamos. Each motor will be set between two Brush 125-light arc dynamos, the shafts of the motor and dynamo armatures being direct-connected. The power transmission is thus confined to the width of the dynamo room. For the power circuits, two rotary converters of 500 K-W. each, or 650 HP., are included in the contract. These will take the three-phase alternating current and convert it into direct current at about 550 volts. For the incandescent lighting system, the ehree-phase current wires will simply be connected to the existing net work, using the present transformers.

NEW COMPANIES.—Sherwood Car Fender Co., Jersey City, N. J.; $400,000, with all paid in; to manufacture street car fenders; Everett Brown, Penn Yan, N. Y.; Judson J. Curtis and Earl Sherwood, both of Honesdale, Pa.; Allen G. Scism and Chas. H. Bonner, of Brooklyn, N. Y.

Interstate Appliance Co., Charleston, W. Va.; $300,000, commencing with $25; to operate transportation lines; to manufacture and lease motor carriages; S. J. Proctor, S. W. Nichols, E. L. Squire, J. H. High and C. C. Hill, all of Charleston.

White Haven Brick Co., Perth Amboy, N. J.; $100,000, with $1,000 paid in; to manufacture brick; W. J. Burke, E. H. Ludeman, New York city; J. A. Greene, Perth Amboy.

Kenney Co., Jersey City, N. J.; $25,000; all paid in; to manufacture plumbers', gas and steam fitters' supplies; John C. Coleman, 17 W. 73d St., New York, N. Y.; Michael W. Nolan, 589 Bedford Ave., Brooklyn, N. Y.; Jas. J. Schoonmaker, Plainfield, N. J.

Leversee & Snyder Mfg. Co., Cohoes, N. Y.; $12,000; Jacob D. Leversee, William W. Snyder, and others.

Textile Machinery Mfg. Co., Jersey City, N. J.; $10,000, to manufacture and deal in silk and other textiles and the machinery for manufacturing them; Alphonse Thourot, Union township, Hudson county, N. J.; Alois Pivety, Union Hill, N. J.; Josephine Adler, New York.

Hawkins Hydro Engineering Co., Minneapolis, Minn.; $30,000; J. B. Hawkins, William Henple, and William J. Rober.

Zbaren Construction Co., St. Louis, Mo.; $5,000; Peter Zbaren, Samuel H. Buschmann, John Oth and Tillie Zbaren.

Indianoma Construction Co., St. Louis, Mo.; $100,000; to do a general contracting business; Henry L. Morrill, Allen R. Dillon, James S. Walker, Claude L. Watson and L. W. Thompson.

Standard Pneumatic Tool Co., Chicago, Ill.; $50,000; C. A. Williams, Frank T. Kinnare, and Hugh J. Kearns.

Western Bridge Co., Chicago, Ill.; $2,500; to manufacture bridges, etc.; Homer S. Wetherell, Henry D. Meads, George F. Hoag.

Charles Mulvey Mfg. Co., Chicago, Ill.; $10,000; to manufacture iron; Charles Mulvey, Belinda J. Mulvey, Mark Agnes Mulvey.

International Dredging Co., Boston, Mass.; $5,000,000, commencing with $5,000; to carry on a dredging business; A. K. Stone, Jacob Hyman and J. N. Lewis, all of Boston; K. J. Mackenzie, Lowell, Mass.; C. E. Tuller, Melrose, Mass.

Standard Drilling Co., Scranton, Pa.; $10,000, commencing with $100; to bore and drill all kinds of wells; W. D. Boyer, T. J. Foster, R. J. Foster, W. N. Henwood and A. R. Raub, all of Scranton.

Consumers' Ice Co., Boston, Mass.; $300,000, commencing with $500; to manufacture and sell artificial ice, and to operate and sell bottling plants; Peter Hartford, B. F. Bates, E. L. Tierney, J. Boardman, Jr., and A. H. Stetson, of Boston.

Standard Roller Bearing Co., Philadelphia, Pa.; $75,000, commencing with $6,000; to manufacture roller bearings for axles of trucks, railway cars, etc.; I. H. Clothier, Wynnewood, Pa.; J. B. Garrett, Rosemont, Pa.; J. C. Winston, Philadelphia; James Boyd, Haverford, Pa.; David Scull, Philadelphia.

Western Cartridge Co., Jersey City, N. J.; $100,000, commencing with $25,000; to manufacture powder, and to conduct a business of iron founders, steel workers, and of mechanical and electrical engineers; Franklin W. Olin, St. Louis, Mo.; Clarence F. McMurray, Troy, N. Y.; E. G. Maturin, East Orange, N. J.

Economy Gas Lamp Co., Jersey City, N. J.; $50,000, commencing with $20,000; to manufacture gas lamps, gas engines, etc.; Jules S. Bache and Hubert A. Hensley, New York; Robert M. Snyder and Michael M. Sweetman, of Kansas City, Mo.

Doremus Brake & Coaster Co., Charleston, W. Va.; $500,000, commencing with $50; to manufacture brakes, etc.; E. L. Squire, S. W. Nichols, S. J. Proctor, W. J. Chewning and U. G. Stricklen, all of Charleston.

Paragon Gas Light Co., Newark, N. J.; $100,000, commencing with $5,000; to manufacture gas lamps and burners; Jas. H. Abercrombie and Edward B. Denny, Newark; John Wysockie, New York.

Atlas Syndicate Co., Jersey City, N. J.; $100,000, commencing with $1,000; to locate, survey and construct railways, wharves, etc.; Chas. H. Hall, Jersey City; H. L. Olden and August Graf, both of 402 West 46th St., New York.

Penn Utilization Co., Philadelphia, Pa.; $50,000, commencing with $500; to utilize garbage and to manufacture therefrom; Wm. H. Wade, William Layer, S. H. Honitz, B. F. Howland and C. M. Butterfield, all of Philadelphia.

Barnes & McCandless Co., Ellensburg, Wash.; $100,000, commencing with $5,000; to operate iron mines, irrigation canals, etc.; S. W. Barnes, Thomas McCandless, J. E. Frost and Ralph Kauffman, all of Ellensburg; J. A. McCandless, Honolulu, Hawaii.

United Glass Pipe & Conduit Co., Philadelphia, Pa.; $2,500,000, commencing with $1,000; to manufacture glass pipes, conduits, etc.; J. W. Bonta, Wayne, Pa.; Horace Pettit and J. M. Huston, Philadelphia; W. H. McGrath, Camden, N. J.; S. B. Lewis, Swarthmore, Pa.

Dominion Promoting, Operating & Investment Co., Camden, N. J.; $500,000, commencing with $1,000; to construct public works, including railways, docks, water-works, etc.; Geo. F. Leland, Wm. W. Power, Chas. F. Corfield, and William Culbertson, all of Philadelphia; James H. Croney, Stanwick, N. J.

Morningside Construction Co., New York; $200,000, commencing with $50; to build houses, etc.; J. L. Robertson, Eatontown, N. J.; Dunbar Hunt, Baldwin (L. I.), N. Y.; Francis Dickson and Julian Trippe, New York; W. P. Godfrey, Little Silver, N. J.

Tippecanoe Pulp & Grindstone Co.; $100,000, commencing with $50; to quarry sandstone, and to manufacture grindstones, etc.; C. J. Raymond, Lockport, N. Y.; W. B. Hanlon, W. H. Park and A. F. Weaver, of Cleveland, O.; Edward Smallwood, Wheeling, W. Va.

Chicago & Milwaukee Transportation Co., Chicago, Ill.; $250,000, commencing with $50; to operate a line of passenger and freight vessels on the lakes; E. B. Burling, C. E. Kibbie, M. T. Baldwin, C. S. Tucker and W. G. Strong, all of Chicago.

Electro Gas Lamp Co., New York, N. Y.; $5,000, commencing with $500; to do general commercial and manufacturing business for the utilization of gas; H. S. Weed, New Canaan, Conn.; Felix Jellinik, C. C. Kalbfleisch, Arthur Schutzinger and Tillie Richman, New York.

Prepaid Meter Co., New Haven, Conn.; $100,000, commencing with $50,000; to manufacture and assign gas meters; J. H. Pomeroy, N. G. Pomeroy, Samuel MacLauchlan, Chas. P. Mayer and S. H. Williams, New Haven.

Ammonia Mfg. Co., Boston, Mass.; $350,000, commencing with $500; to deal in refrigerating, cold storage and artificial ice plants; Peter Hartford, E. L. Tierney, John Boardman, Jr., S. J. Hutchinson and A. H. Stetson, all of Boston.

Central Engineering & Equipment Co., Philadelphia, Pa.; $1,000,000, commencing with $1,000; to construct and sell railways and breweries, and to do a general contracting business; B. J. Woodward, L. G. Dutton, J. H. Shrite, J. A. Baker and T. B. Harned, all of Philadelphia.

Duff Construction Co., Saco, Me.; $20,000, commencing with $300; to carry on a general manufacturing, mechanical construction and mercantile business; Pres., J. Wesley Duff; Treas., W. J. C. Milliken, both of Old Orchard, Me.

Erie Construction Co., Chicago, Ill.; $50,000; Herbert Evans, James R. Considine and George R. English.

Consolidated Construction Co., Brooklyn, N. Y.; $20,000; A. S. Proskey, J. T. Allen, Samuel Proskey, J. W. Parker, J. H. Burchell.

New England Electric R. R. Construction Co., Worcester, Mass.; $25,000; Pres, E. E. Carpenter; Treas., H. F. Leland.

Dunkirk & Fredonia Telephone Co., Dunkirk, N. Y.; $40,000; to construct and maintain a telephone line between Dunkirk and Fredonia; F. W. Plato, M. A. Phelps, G. H. Frost, Buffalo; J. C. Moorehead, Cleveland; S. F. Nixon, Westfield.

West Penn Telephone Co., Washington county, Pa.; $12,000; J. G. Hanna, D. K. Irwin, E. E. Mumper, J. M. Bemis, O. M. Henderson, T. Y. Hamilton and Joseph McElroy.

Knickerbocker Telephone & Telegraph Co., New York; $7,500,000; to operate a telephone and telegraph system in New York and from that city to Rouse's Point, Ogdensburg and Buffalo, to Montauk Point and Fire Island; to Weehawken, Hoboken, Jersey City, Bayonne, Elizabeth and Perth Amboy, N. J., and to Paterson, Newark, Orange, Plainfield, New Brunswick and Long Branch; directors, Samuel B. Lawrence, Francis P. Lowrey and Charles L. Horton, New York; J. D. Summerfield, H. M. Haviland, G. E. Spence and H. C. Everdell, of Brooklyn.

Buffalo Telephone Co., Buffalo, N. Y.; $500,000; to operate a telephone line in Buffalo, to Lockport, Medina, Albion, Brockport, Rochester and other cities; George K. Birge, Daniel H. Lockwood, C. E. Williams, L. B. Crocker, William H. Kinch, Joseph Kennedy, William B. Hoyt and R. J. Getz, of Buffalo.

Chester County Telegraph & Telephone Co., Oaks, Pa.; $30,000; to run its lines in Chester, Montgomery, Bucks, Lancaster and Delaware counties; Samuel W. Gumbes, Samuel W. Gumbes, Jr., Frank M. Gumbes, of Oaks; Thomas L. Hodge and William D. Barnard, of Philadelphia.

Union Telephone Co., Portland, Me.; to operate telephone lines and deal in telephone and electrical supplies; Pres., F. H. Gorman, New York; Treas., G. A. Beaton, Detroit, Mich.

Bucksport & East Orland Telephone Co., Bucksport, Me.; $2,000, commencing with $1,000; to purchase or lease a line from Bangor to Bucksport; Pres., J. B. Brainerd, of Orland, Me.; Treas., John N. Swasey, Bucksport.

Livingston County Telephone Co., Pontiac, Ill.; $65,000; to operate a telephone exchange; W. E. E. Herron, John S. Murphy, A. M. Legg.

Ogle County Telephone Co., Rochelle, Ill.; $5,000; F. W. Hamlin, John Delancy and A. W. Guest.

Clinton County Telephone Co., Carlyle, Ill.; $2,500; to construct and operate telephone system; G. Van Hoerbeke, J. C. Eisenmeyer, Thomas Ford, Otto Koch, W. S. London.

Mason Phone Co., Elizabeth, N. J.; $200,000 to manufacture telephones; James H. Mason, Brooklyn, N. Y.; George H. Mills, Elizabeth, N. J.; William S. Silver, Orange, N. J.; Leroy A. Gibby, Summit, N. J., John B. Riggins, New York.

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